

THIRTY-SEVENTH ANNUAL REPORT

OF THE

BOARD OF PUBLIC WORKS

TO THE

GOVERNOR OF THE STATE OF OHIO,

FOR THE YEAR 1875.



COLUMBUS:

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1876.

OFFICE OF THE BOARD OF PUBLIC WORKS,
COLUMBUS, *December 20, 1875.*

To His Excellency WILLIAM ALLEN, Governor of Ohio :

SIR : In compliance with the requirements of law, the thirty-seventh annual report of the Board of Public Works is herewith respectfully submitted.

R. R. PORTER, *President.*

ANNUAL REPORT.

As required by law, the Board reorganized on the 9th of February last. Martin Schilder having been elected a member of the Board in October last, presented himself, with credentials, was duly sworn in, and took his seat as such for the term of three years from the second Tuesday of February, 1875, S. R. Hosmer retiring. The membership of the Board now consists of R. R. Porter, Philip V. Herzing, and Martin Schilder.

No change was made in the divisions of the works, they remaining as heretofore subdivided, as follows :

Division Number One includes the northern portion of the Ohio Canal (extending from Cleveland to Hebron), the Walhonding Canal, and the Western Reserve and Maumee Road. R. R. Porter, Acting Commissioner, in charge ; William S. Williams, Resident Engineer.

Division Number Two consists of the southern portion of the Ohio Canal (extending from Hebron to Portsmouth, and including the Columbus side-cut), the Hocking Canal and the Muskingum Improvement. Martin Schilder, Acting Commissioner, in charge ; A. J. Cryder, Resident Engineer.

Division Number Three embraces all of the Miami and Erie Canal (extending from Cincinnati to Toledo, and including all the reservoirs connected therewith). Philip V. Herzing, Acting Commissioner, in charge ; John W. Erwin, Resident Engineer.

APPOINTMENTS.

The following appointments were made, to wit: William S. Williams, of Canton, Resident Engineer on Division Number One ; A. J. Cryder, of Chillicothe, Resident Engineer on Division Number Two ; John W. Erwin, of Hamilton, Resident Engineer on Division Number Three ; William Ross Ritts, of St. Clairsville, Resident Engineer on the National Road ;* Henry L. Wood, of Woodville, Superintendent of the Western Reserve and Maumee Road ; A. B. Newburgh, of Columbus, Secretary.

* William Ross Ritts died on the 23d of April, whereupon, on the 15th of May thereafter, S. R. Hosmer, of Zanesville, was appointed in his stead, Jonas Willcox, Superintendent, acting in the interim in the double capacity of Engineer and Superintendent.

RECEIPTS AND EXPENDITURES.

The receipts from all sources (not including the National Road) for the year ending November 15, 1875, were as follows:

From the Western Reserve and Maumee Road	\$4,459 29
From P. V. Herzing, for rent of land at and near the Lewistown reservoir..	197 00
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	\$4,656 29

The expenditures for the same period were—

For superintendence and repairs of the Western Reserve and Maumee Road	4,459 29
For "ascertaining and locating lands," under law of 1872 (see appropriation act of 1874), as follows:	
On Division Number Two.....	\$195 00
" Three	800 00
	<hr/>
	995 00
For removal of obstructions in slackwater at Providence feeder dam (see Laws of 1875, page 110)	2,717 75
For attorneys' fees and incidentals	657 09
For salaries of Engineers on Divisions One, Two, and Three.....	3,600 00
For salary of Secretary	1,500 00
	<hr/>
	\$13,929 13

A full statement of the receipts and disbursements on the National Road will be found in the report of the Resident Engineer of that road, which report is hereto appended.

Following are the names, salaries, and terms of service of the members of the Board, Engineers and Secretary:

Name.	Office.	Period of service.	Amount.
R. R. Porter....	Member Board ...	November 15, 1874, to November 15, 1875.	\$800 00
Ph. V. Herzing..	"	"	800 00
S. R. Hosmer ...	"	November 15, 1874, to February 15, 1875..	200 00
Martin Schilder.	"	February 15, 1875, to November 15, 1875.	600 00
Wm. S. Williams	Resident Engineer	November 15, 1874, to November 15, 1875.	1,200 00
A. J. Spaulding.	"	November 15, 1874, to February 15, 1875.	300 00
A. J. Cryder....	"	February 15, 1875, to November 15, 1875.	900 00
John W. Erwin.	"	November 15, 1874, to November 15, 1875.	1,200 00
A. B. Newburgh.	Secretary	"	1,500 00

DIVISION NUMBER ONE.

Ohio Canal from Cleveland to Hebron, Walhonding Canal, and Western Reserve and Maumee Road.

The Ohio Canal, from Cleveland to Hebron, was ready for the resumption of navigation, throughout, about the first of May. This event would have occurred at an earlier period but for the severity of the preceding winter, which formed such very heavy ice that many weeks of warm

sunshine were necessary to dissolve it. Since the opening, however, there has been no interruption to navigation from any cause. There was abundance of water in all the reservoirs and feeders, and the canal having been dredged out and generally repaired where needed, boats carrying unusually heavy loads passed along easily and rapidly. Nearly 100 tons of freight were in some instances carried into Cleveland on a single boat, while usually 76 to 86 tons were transported readily. An unusually large amount of coal was delivered through the canal during the season, in the city of Cleveland, the books at the collector's office showing an aggregate of 184,984 tons, while of iron there was transported to that city 4,514 tons. The coal was mostly from the mines near Akron and those between Akron and Massillon, and the iron, in the main, is from the Glasgow furnaces, near the southern line of Tuscarawas county. These results are gratifying, as showing the canal to be in an efficient condition.

The new outlet-lock, near the southern limits of the city of Cleveland, has so far progressed toward completion that it is expected boats may lock through it down into the Cuyahoga some time during next summer.

The recommendation of the Resident Engineer (W. S. Williams) on this division, as to the certain means of insuring a full supply of water on this portion of the Ohio Canal in seasons of drouth, is fully indorsed by the Board, and is worthy of consideration.

Full details as to all matters pertaining to this division of the Ohio Canal will be found in the report of the Resident Engineer, appended hereto.

Walhonding Canal.

Navigation was not commenced on this canal until the 15th of May, owing to extensive damages to the dams and embankments, caused by the passing out of the heavy ice formed in the Walhonding River during the winter. The damages, except as to one of the dams, were speedily repaired, and since then navigation has been uninterrupted. There are three State dams on the Walhonding River, two of which were built at the time the Walhonding Canal was built, and the third or lower dam was constructed at the time the Ohio Canal was built, some years before the former. It was intended as a feeder dam to the Ohio Canal. Since the construction of the Walhonding Canal and the two dams above, the lower dam has been of no practical use, inasmuch as all the water needed to supply the Ohio Canal and to operate the manufacturing establishments at Roscoe is supplied from what is known as the "Six-mile dam." All three of the dams were seriously injured last spring, and two of them (the upper ones) repaired thoroughly, while the other (lower one) has

not been repaired, on account of its entire uselessness, having been altogether superseded as a feeder dam, and the Board are advised that the land-owners above it not only do not desire its maintenance, but protest against it.

Western Reserve and Maumee Road.

The Resident Engineer reports in detail as to operations on this road. His report is appended.

National Road.

The report of S. R. Hosmer, Resident Engineer, as to matters pertaining to this road, will be found in detail elsewhere in this report.

In the main, the road is in better condition as to repair than it has been for several years. Many of the bridges, however, will need new superstructures in a very few years, and as the keeping up of the bed of the road, in even tolerable condition, absorbs all the revenues, how to renew the superstructures of bridges, when this shall be required, is a somewhat difficult matter to solve. But sooner or later it will have to be done.

In this connection the Board may state that while the road has been maintained in generally fair order, it is not possible with the limited revenue derived from it to keep it in first-class condition. This the public seem to demand and expect; but when it is remembered that the road is 171 miles in length, and all of it requiring extensive repairs and renewals of stone from year to year, to say nothing of new superstructures to bridges, etc., the impossibility of meeting public expectation with a revenue of less than \$20,000 will be apparent.

The Board regret to be obliged to report that in settling up the affairs of William Ross Ritts, late Resident Engineer, a deficit of \$879.65 was found to exist. It is not believed this sum will be lost to the road fund, inasmuch as his bonds are perfectly good. The Attorney-General has the matter in hand.

DIVISION NUMBER TWO.

Ohio Canal, from Hebron to Portsmouth.

Navigation on this portion of the Ohio Canal was closed about the middle of December, 1874, and remained closed until about the middle of March last. On that portion between Hebron and Tomlinson's dam the water was drawn off for repairs on the 15th of May, and remained off from ten to fifteen days. From Tomlinson's dam to Portsmouth repairs commenced on the 3d day of July, and continued until the 23d, during

which time the water was drawn off. The needed repairs were all well and promptly made. Many breaks were caused by the floods of the summer months on this section of the canal, especially at and south of Circleville, some of them of unusual magnitude, by reason of which navigation was somewhat obstructed on part of it.

The whole line from Hebron to Portsmouth was inspected by the Board in the month of October last, and was found to be in good navigable condition. The repairs of an ordinary character, as well as the serious breaches referred to, had all been effected in a satisfactory manner.

The General Assembly of 1874 appropriated the sum of \$950.00 to deepen and widen the upper and lower culverts at Canal Winchester. This was not done last spring for the reason that the work could not be completed while the water was drawn. It will be done during the winter or spring.

Hocking Canal.

About the 15th of March navigation commenced on this canal, it having closed, as in the case of the lower part of the Ohio Canal, about the middle of December preceding. There was no interruption to navigation (except for the usual spring repairs) until the first of August and thereafter, when the floods in the Hocking River caused a large number of breaches in the banks, and made large deposits of sand, coal slack, etc., in the bed of the canal. To repair these breaches and to remove the deposits of debris, occupied a period of nearly forty days. The Board inspected the line in October. The bottom of the canal had been thoroughly cleaned of the deposits, and the breaches well and substantially closed. It was in really fine condition, and more boats were plying upon it than the Board had noticed, when passing over it, in many years.

In the floods of July, 1873, the dam over the Hocking, near Chauncey, was destroyed, and the only remaining level of that canal, below the dam, seriously injured. Some years ago the Legislature gave the terminus of this canal, in Athens, as well as several miles above, to the town of Athens, thereby practically terminating navigation at Chauncey. The dam referred to has not been rebuilt, and the canal below it has not been repaired. The Board regard it as wholly unnecessary to restore this dam and level, inasmuch as they would be of no value whatever if restored.

Muskingum Improvement.

Steamers commenced running on the Muskingum, between Zanesville and Marietta, on the first of March. Navigation was good throughout the season, except that a week's suspension occurred in consequence of the

yielding of the miter-sill in the lock at Rokeby, in October. The high water and the ice of the winter of 1874-5 did great damage to some of the dams, portions of which it became necessary to rebuild. Considerable bars were also formed in several places. The lock at Harmar, which has been the cause of some uneasiness, from its inclination, was relieved and all danger removed by putting in an arched protection-wall, by which the pressure of the bank against the lock wall was removed. It may now be regarded as secure, and likely to remain so for many years.

Under the act of 1872, requiring the Board "to ascertain and locate" certain lands, a survey was made of lands and lots in the city of Zanesville and in other parts of Muskingum county; but, singularly, while the surveyor furnished a plat, he omitted to describe the lands and lots by numbers and by metes and bounds, so as to enable the Auditor, if they were sold, to describe them in his deeds. The plat has been returned to the surveyor for correction in this particular. It is not believed, however, that these lots and lands can be sold at present.

DIVISION NUMBER THREE.

Miami and Erie Canal.

This portion of the public works was in good navigable condition on the opening of navigation last spring. On the southern part (Piqua to Cincinnati) boats commenced running on the 6th of March, and on the balance, northward to Toledo, between that date and the 15th, notwithstanding the severe winter which intervened between the closing, about the first of January, and the opening. The good condition of the works, at the time of resumption of navigation, was due greatly to the thorough and substantial character of the repairs usually made.

Early in May the Board passed over the entire line from Cincinnati to Toledo. They found the works so generally and thoroughly in repair, that it was necessary in but few instances to call attention to omissions of repairs, and these were of minor importance. Water was abundant in the reservoirs, and boats were running, carrying full cargoes, without experiencing any difficulty.

The heavy rains, which commenced early in June and continued, more or less, until the early part of August, caused serious damage on the entire line; but on that portion between Piqua and Dayton and Dayton and Cincinnati, at some points, the breaches in the banks, the filling in of bottom of the canal with debris, and injuries to structures, were of unusual magnitude; in many instances, for considerable distances, the works were nearly destroyed—as, for instance, near Tippecanoe, Dayton, Franklin, etc. These injuries were repaired as soon as possible, the

dredge-boats and a large force of men having been employed almost night and day to accomplish the work. Navigation was necessarily suspended, at intervals, for several weeks, while this work was going on. Since August, however, there has been uninterrupted navigation throughout the line from Cincinnati to Toledo.

The report of John W. Erwin, Resident Engineer, is hereto attached, and forms part of this report. To it reference is made for full details.

Wabash and Erie Canal in Indiana.

In the report of the Board for last year attention was called to the fact that a suit was pending in the United States Court, in Indiana, the result of which might place that part of the Wabash and Erie Canal within that State in a very uncertain condition as a permanent work, and the advice or suggestion of the Board, by implication, was to the effect that the matter should receive the attention of the General Assembly. This body, however, (although one branch of it had a special committee organized to consider canal affairs,) gave this important subject no attention. The Board have now to add that they have information that the suit referred to came to an issue since the date of their last report, and that a decree was taken, under which that portion of the Wabash and Erie Canal lying within the limits of the State of Indiana may be sold. If sold under the decree, it may be considered as virtually abandoned; and its abandonment in Indiana practically destroys, or renders almost valueless, that portion in Ohio lying between what is called the Junction and the State line, and necessarily depreciates the value of that part lying between Junction and Toledo. This is obviously a fact, as during the past season there was an entire cessation of commerce between Ohio and Indiana *via* said canal, because of its utter impracticability on account of its broken and demoralized condition between Fort Wayne and the State line.

The Wabash and Erie Canal, designed to connect the navigable waters of Lake Erie with those of the Wabash River, was constructed jointly by the two States, under a compact mutually entered into, and was to be and remain forever a public highway, open for the use of citizens of other States, as well as those of Ohio and Indiana, on terms of equality. It is practically *one* canal, extending from the navigable waters of the Wabash to those of Maumee Bay, and the destruction of a part can not fail to involve the whole in partial, if not entire, ruin. The State of Ohio has observed her part of the compact faithfully; and now the question is, can the State of Indiana permit her part of the canal to go to ruin, or be abandoned, as a canal, without violating her plain duty? Can Ohio, in

justice to herself and her duty to her own citizens, stand still, without making an effort to save the canal, and thus permit it to be abandoned or destroyed? To do so is suicidal in the extreme, for in this way she abandons the interests of a large body of her own citizens, who, relying on the good faith of the two States in the construction and maintenance of the canal, have made large investments along the line of the same.

Moreover, the State itself will be a large loser, from the fact that a source of revenue will be thus cut off, which is absolutely necessary to maintain, in a navigable condition, that part of the Wabash and Erie Canal extending from the State line to Toledo.

The Board thus refer, in this report, to questions of grave importance (in relation to this canal) to the people of the State, in the confident hope that something will be done by the General Assembly to avert what can not but be regarded as a great calamity, involving, too, the violation of the plighted faith of a neighboring State.

MERCER COUNTY RESERVOIR.

In the last annual report of the Board, attention was called to the fact that a large amount of water was taken, under a lease, from this reservoir, at the town of Celina, for hydraulic purposes, and lost to the public works of the State by being carried down the Wabash River. As the facts in regard to that piece of shortsightedness on the part of a former Acting Commissioner of this Board are fully set forth in that report, we here reproduce the paragraph on the subject from the last annual report:

About twenty-two years ago the then Acting Commissioner in charge of the Miami and Erie Canal entered into a lease with parties at Celina, by which the latter were to be supplied with power from the waters of this reservoir at that point. It was a great mistake to lease this power, and the State has lost largely of revenue in consequence of it. The water is taken out of the reservoir over a waste-weir eighty feet long, and after passing through the mills or works of the lessees, flows into the head-waters of the Wabash River and is lost. This water, instead of being thrown off in that direction, should be reserved in the reservoir, to be used as demanded in supplying the Miami and Erie Canal from St. Mary's to Defiance. In passing down the canal to the latter point, not only would there be a full supply of water at all times for the purposes of navigation, but it could be utilized and made productive in the creation of hydraulic power as it passed each lock on its way to the Maumee River, as well as being of service to the slack-water of that river. The State has expended not less than \$600,000 in the construction of this reservoir, covering over seventeen thousand acres of land. Now it should see to it that the waters laid up in it are not thrown off into the waters of the Wabash, but turned in the other direction, and be thus used for the purposes for which the reservoir was created, to wit, to supply the Miami and Erie Canal with perfect navigation. The remedy is plain. The leases at Celina should be compromised and canceled by a purchase of the rights acquired by the lessees.

What sum of money would be required to accomplish this very desira-

ble object the Board has no means of knowing; but they beg leave respectfully to suggest to the General Assembly that some action be taken looking to the extinguishment of the rights of the lessees of water-power so erroneously leased.

SALE OF STATE LANDS IN AND NEAR THE LEWISTOWN RESERVOIR.

An act was passed by the General Assembly on the 29th of April, 1872 (Ohio Laws, 1872, p. 194), "to authorize and require the Board of Public works to ascertain and locate all lands belonging to the State, which lie at or near the public works of the State, with a proper description of the same, and also providing for the appraisement and sale of said land," and, to defray the expenses incident thereto, on the 20th of April, 1874, the sum of \$1,490 was appropriated. As required by the act referred to, the Acting Commissioner on the third division (Ph. V. Herzing), in conjunction with John W. Erwin, Resident Engineer on the same division, entered upon the discharge of the duty assigned to him. The result was the discovery of a number of pieces of land, aggregating 1,130 acres, lying in and around the Lewistown reservoir, which, as they were not included in or affected by the lease of the public works, might be sold. These pieces were surveyed and appraised, and in July last the survey and appraisement, with a plat showing the number of acres and location, were reported to the Auditor of State. The Auditor caused them to be advertised for sale on the 31st of August, and on that day they were offered for sale. They were not all sold, however. The following is a list of the pieces sold, with the number of acres in each, and the names of the purchasers:

SALE OF STATE LANDS.

SURVEY.	TRACT.	ACRES.	PURCHASERS.
Survey No. 2.....	Tract A.....	140.19	Robert Hutchins.
" 2.....	" B, C and D.....	25.56	James Ewing.
" 2.....	" E.....	94.72	Henry Merchantell.
" 3.....	" A.....	86.69	Wight and Kuhns.
" 5.....	.....	8.00	James Taylor.
" 6.....	.....	57.62	Amos Cherry.
" 8.....	.....	30.12	H. Hendrickson.
" 9.....	.....	1.50	Salathiel Prater.
" 11.....	.....	50.14	John A. Pollock.
" 12.....	Red-oak Island.....	2.71	Timothy Downing.
" 13.....	Snow Island.....	2.00	Jos. H. Hall.
" 15.....	Pony Island.....	20.03	H. Harrod.
" 16.....	Scott Island.....	36.50	Samuel W. Neville.
" 17.....	Lake Ridge Island.....	91.00	H. Spencer.
" 20.....	Small Island.....	2.63	Thomas Axtell.
" 21.....	Mud Branch Island.....	25.64	
Total acres.....		675.05	

So far as these pieces were concerned, in reporting the survey and appraisal to the Auditor of State, the duty of the Acting Commissioner in regard to them ceased. The amount realized to the treasury from this sale will be reported by the Auditor.

Further researches have been and are still in progress, which the Board confidently believe will result in finding many more pieces of land that can be sold without detriment to the interests of the public works. But to ascertain all the facts about these unknown lands, so that location, discription, and quantities may be reported to the Auditor of State, is a work of considerable magnitude, requiring persistent labor, and involving no inconsiderable expense. The records in all the counties in which the State ever acquired lands by purchase, by donation by the General Government, or otherwise, must be carefully searched, to meet the expenses of which the Board beg leave to say the appropriation of \$1,490 is entirely inadequate.

The Acting Commissioner and Engineer of the third division are prosecuting the search for these lands in many of the north-western counties with prospects of a fair measure of success, and they will, when they shall have obtained such definite information as will enable them to do so, report surveys and descriptions to the Auditor, preliminary to further sales.

PROVIDENCE SLACKWATER.

On the 21st of February, 1873, the General Assembly passed an act "to authorize the excavation of a channel and removal of obstructions in the slackwater at the Providence feeder dam, on the northern division of the Miami and Erie Canal." (Laws, 1873, p. 304). The act appropriated the sum of \$7,000 to accomplish this work, and required the Governor to appoint, with the advice and consent of the Senate, three commissioners to carry out the purpose and object contemplated. The commissioners were duly appointed, and proceeded to the discharge of their duties. The first thing in order was to advertise for proposals to execute the work. This was done, bids received, and the work contracted, it is to be presumed, to the lowest responsible bidder. In the progress of the work the commission, under the contract thus entered into, expended the sum of \$4,282.25 of the appropriation, leaving a balance of \$2,717.75 unexpended.

Thus far had matters proceeded under the commission when, on the 27th of March last, the General Assembly passed an act entitled "An act supplementary to an act entitled an act to authorize the excavation of a channel and removal of obstructions," etc. (Laws, 1875, p. 110.) By reference to this act, it will be seen the office of the three commissioners

was abolished, and they were required to hand over to the Board all "books, papers, contracts, and records" pertaining thereto. This done, the work has since been prosecuted under the direction of the acting Commissioner and Engineer of the third division of the public works. The appropriation is now exhausted, the Acting Commissioner having paid to contractors, etc., the \$2,717.75 remaining when the office of the commissioners ceased, as follows:

To Smith, Hayes & Co., on contract.....	\$2,639 75
To Geo. E. Welsted, for services as special engineer.....	78 00
Total.....	<u>\$2,717 75</u>

A statement of the present condition of the work will be found in the report of John W. Erwin, Resident Engineer, to which, attached to this report, reference is made. From this statement it appears that the contractors have gone on and done a considerable amount of work since the appropriation became exhausted, and that they propose to complete the work. The excess of work done and to be done, at the contract price, will amount to about \$12,000. This, inasmuch as it is the contractors' own proposition, we leave in the hands of the General Assembly without recommendation.

AS TO LANDS IN THE PAULDING AND MERCER COUNTY RESERVOIRS.

It appears there are several tracts of land covered by the waters of Six-mile Creek (or Paulding County) and Mercer County reservoirs, the titles to which, it is claimed, have remained, during all the years since these reservoirs were built, in the United States. Recently parties have entered them at the General Land Office, in Washington, and now demand possession. To this end proceedings were instituted in the courts of Paulding county as to the lands claimed within the reservoir in that county, and notice served on the Board to answer in February last. The case was handed over to the Attorney-General, who gave it his attention, and, we believe, caused its dismissal. What further action will be taken by the claimants, we are not advised. It is very certain the State can not vacate these lands without also vacating its own lands, aggregating about eighteen thousand acres, within the banks of these two reservoirs, and thus destroy them, and with them a large portion of the Miami and Erie Canal. Ultimately, no doubt, the State will be obliged to secure title to the lands in question. With this in view, the Board have taken the preliminary steps to have them condemned, by entering orders on their journal to that effect, but this was all they could do about it, inasmuch as the law (S. and C., pp. 1250, etc.) requires a tender of certain moneys,

which they could not command in the absence of appropriation by the General Assembly. The matter is now in the hands of the Attorney-General, who will probably communicate to your body his views on the subject.

CLAIMANTS FOR DAMAGES NEAR THE LEWISTOWN RESERVOIR.

The General Assembly will find in the annual report of the Board for last year (1874), and in the report of John W. Erwin, Resident Engineer, for this year (which is appended to this report), all the information the Board have on the subject of claims for damages on account of the overflowing of the Lewistown reservoir. Possibly, under all the circumstances, it might be well to give Mr. Erwin's recommendation, to be found in the last paragraph of his report, some consideration.

CANAL INVESTIGATING COMMITTEE'S REPORT.

The Board deem it necessary, in justice to themselves, to say a few words in regard to this report.

In their last annual report, the Board, after having carefully inspected all the lines of public works of the State, presented what they regarded as a fair and impartial statement of their condition and the manner in which they had been kept in repair by the lessees. This statement of the Board seems not to have been accepted as truthful; for, on the 28th of January last, by resolution, a special committee, consisting of members of the House of Representatives, was raised, clothed with authority to investigate the action of the Board of Public Works in relation to the management of the public works. This resolution, at the instance of the committee, was supplemented by another, which greatly enlarged the scope of investigation and the powers of the committee.

The committee proceeded with the investigation, and in the expiring hours of the session of the General Assembly, when the House was convulsed with the celebrated "Wood county case," presented its report, entitled "Investigation concerning the Public Works of Ohio, including the report of the committee and the testimony taken, in compliance with House Resolution No. 128," and obtained an order that it be laid on the table and printed. This document, which is now printed, makes a volume of 742 pages, all of which, except two and a half pages, consists of the testimony of witnesses—the two and a half pages comprising the report proper of the committee.

There is no "summing up" by the committee of the testimony contained in the 736 pages, to show what it proves. This, it is the opinion of the Board, in a spirit of fairness, should have been done by the com-

mittee, instead of indulging, as it will be seen they did, in *general and wholesale charges*. This Board, however, examined the testimony with some care, and found that a large part of it had reference to the depreciation of the public works—some of the witnesses swearing they had depreciated 25 per cent., others 50 per cent., and others, again, 100 per cent., as compared with their condition in 1861, when they were leased, thus controverting the statements of this Board, in regard to their condition, in their annual report for 1874. The statements made by the Board in their report were based on actual knowledge of the condition of the several works, obtained by careful examination of all of them, and were simply just, as can be demonstrated.

The testimony goes on to show that the Miami and Erie Canal, from Toledo to Defiance, and the Ohio Canal, from Akron to Cleveland, are absolutely in such bad condition that boats of a moderate tonnage can not navigate between those points. This is a shameful perversion of the truth. It is true, instances have occurred, on the portions of the canals referred to, when obstructions to successful navigation, for brief periods, have existed. They existed as well under State management, and are unavoidable. No Board has ever existed that was permitted to control the elements. These obstructions were generally caused by bars being thrown into levels in times of heavy rains, and were invariably removed in the shortest possible time. At other times, in seasons of extreme drouth, some of the levels, for short periods, have not had sufficient water to float heavily laden boats. This has always been the case. But when the water is in proper stage it would be impossible to load a boat down so that it could not successfully and speedily navigate the Miami and Erie Canal from Defiance to Toledo. And as to the Ohio Canal, from Akron to Cleveland, its condition for navigation can be judged when it is stated that boats have, the past season, passed through it carrying over *ninety tons*, one boat taking into Cleveland a load of *ninety-eight tons and eighteen hundred pounds*, a thing never before done since the canal was built.

As the sections of the Ohio Canal between Cleveland and Akron, and the Miami and Erie Canal next to Toledo, were more particularly assailed in the testimony given before the committee, the Board, in its comments, has given its attention specially to them, and in the statement of facts made in the preceding paragraph, which can not be controverted, has refuted the testimony of the committee's witnesses as to the capacity for tonnage of both the sections referred to. These statements can be verified by the evidence not only of the books in the collector's offices at Cleveland and Toledo, but by that of all unbiased business men and

boatmen on the respective lines. They are true. We might refer, also, to a small amount of testimony of a disparaging character in relation to other parts of the public works, and demonstrate its unreliability by a showing of facts and figures, but do not deem it necessary to do so.

The Board do not desire to be understood as questioning the right of the General Assembly to examine into matters pertaining to the public works and their management, or of the conduct of the Board of Public Works in relation thereto. But there should be reasonable cause for such investigation, and it should be conducted in a spirit of fairness, with the simple purpose of learning the facts from witnesses who are free from bias. But such was not, in the opinion of the Board, the character of the investigation conducted by the House committee. The object seemed to be to make a case against the public works, and to disparage and injure them as much as possible as channels of commerce. Hence, in the wanderings of the committee in quest of witnesses, it failed to invite, to give testimony, intelligent business men and boatmen doing business on the canals, who could and would testify fairly and squarely. The desire seemed to be to obtain only the testimony of persons who were, from some cause, prejudiced, many of whom were lamentably ignorant of matters about which they spoke, though perfectly willing to depreciate the public works, or throw suspicion on some act of the Board. Such testimony was freely taken, without, for a moment, scanning the motives actuating the witnesses.

The present members of the Board do not believe that their predecessors stultified themselves in the annual reports emanating from this office, in which the condition of the public works, from year to year, and the manner in which the lessees had discharged their duties, are detailed, and the present Board know that it has been their object and aim to be just, impartial, and truthful in the details given in the annual reports which they, from year to year, have united in making.

In the opinion of the Board, no more effective mode could be adopted to destroy the business and diminish the revenues of the public works of the State than that adopted by the committee to whose report we have referred. The effect has been quite perceptible in the decline of business, on some portions of the works, during the season of navigation just passed. The committee placed in the hands of competing lines the authority for saying that the public works of Ohio can not be relied on as channels of commerce; and it would have been strange, indeed, if the drummers for freight for such lines had failed to see the force of the argument thus put in their mouths, and to use it, too, to the detriment of the public works in abstracting the traffic from them.

Thus the State is called upon to pay very considerable bills of expense, in the way of witness fees, printing, etc., to accomplish an injury to the works of internal improvement, which are the property of the people. To decry them now—to say that they are unreliable—is assuming the risk of injuring them irreparably, so that when they return into the hands of the State for management, in a very few years, there will be no business on them, and consequently no revenues.

In that part of the volume which may be called the report proper are these words: "Some very questionable transactions have occurred, in which it is believed by your committee the Board of Public Works are justly censurable, in this: they did not protect the interests of the State." This the Board are constrained to regard as a stab in the dark. If the testimony before the committee justified them in coming to such conclusion, it seems to this Board it would have been at least just and fair for the committee to have specified the charges hidden under the ambiguous term "*questionable transactions*." The Board can not be expected to know what the committee refer to. They will, therefore, only say, as to this, that they are unconscious of any intentional neglect of the interests of the State.

The committee refer to "a vast amount of timber sold and removed by lessees of water-power." In this they have reference to a lease of water-power to Collins Wight, at the Lewistown reservoir. The language employed conveys the idea that in this transaction the State was a fearful sufferer. In this instance, as in some others, a mole-hill assumes the proportions of a mountain. The facts are substantially as follows: The lease to Collins Wight stipulated that he might cut any timber surrounded by water, and that privilege was intended merely to confer the right to cut the timber standing in the reservoir, which, by reason of being submerged at the roots, would inevitably die and become a nuisance to be removed at considerable expense. To remove timber similarly situated in other reservoirs had cost the State large sums of money. To get rid of it in this reservoir, without cost, was an object. There was, however, timber on islands within the reservoir, which Mr. Wight claimed the right to cut, and some of which was taken by him and his partner. This fact coming to the knowledge of the Board, an order was passed, more than a year ago, prohibiting the further cutting of timber.

As to leases of water-power and renewals of the same, the Board have to say that the mode of granting leases dates back to an early period in the history of the public works. The present Board has followed precedents. Perhaps a better system could be devised.

The Board approve what the committee say in regard to certain water

leases at Celina, on the west bank of the Mercer County Reservoir. The committee, however, did not make an *original* discovery about the leases at that point, as will be seen by reference to the last annual report of the Board (pages 8 and 9), made before the committee was organized. The leases referred to were made in 1853, by the then Acting Commissioner, A. P. Miller, and it is a well-known fact that in making them he not only did not have the co-operation of his colleagues, but had the decided opposition of his engineer. All Boards since his day have regarded his act in thus leasing water at this point, to be taken out of the Mercer County Reservoir and wasted in the Wabash River, instead of turning it into the Miami and Erie Canal, to flow thence into the Maumee, at Defiance, as a grave mistake.

Referring again to the charge made by the committee that the Board has failed "to protect the interests of the State," we feel constrained to say that, while the Board of Public Works are, by the constitution and laws, made the custodian of the public works, and are, as sworn officers of the State, the proper source of information in relation to them, it has of late years become the custom of the Legislature and its committees to ignore them, and seek information from other and frequently from prejudiced and unfriendly sources, by which the interests of the State have often been seriously damaged. One instance, among many, will suffice for illustration: The Legislature, last winter, appropriated the sum of \$6,500 to pay the heirs of a Mr. Banker for damages to lands owned by these heirs, near the Middletown dam. This appropriation was made without calling on the Board for information in regard to the merits of the claim. Had the committee, which had it in charge, called for the facts in the case, they would have learned that the heirs of Mr. Banker had, in consideration of the building of certain guard-banks and levees by the State and the lessees, jointly, agreed to release all claims for damages to their lands, and that the guard-banks and levees referred to were built several years ago.

R. R. PORTER,
P. V. HERZING,
MARTIN SCHILDER.

REPORT OF THE RESIDENT ENGINEER ON DIVISION No. 1.

TO HON. R. R. PORTER, *Acting Commissioner, in charge of Division No. 1:*

The following annual statement of the condition of the first division of the public works is respectfully submitted:

OHIO CANAL—CLEVELAND TO HEBRON.

The long and severe winter delayed the opening of navigation upon this portion of the Ohio Canal until about the first of May, while upon the southern portion it was considerably earlier. From the time of opening, however, until the 1st of December there was a continual, uninterrupted and prosperous season of navigation. The reservoirs were all full, and the feeders and streams were well supplied with water during the entire summer. Portage summit, which is the natural divide between the water-shed of Lake Erie and that of the Ohio River, seems, this year, also to have been the point of division in the amount of rainfall. South of the summit the rains were frequent and very abundant, yet there were no severe floods. Streams were swollen, it is true, but not sufficient to cause any serious damage to embankments, while on the Lake Erie slope the water of the Cuyahoga River was discolored by reason of rains only on one or two occasions during the season.

Repairs.—At Bridgeport there is a very serious slide taking place. A fill on the berme-bank side of the canal is slowly and gradually coming down into the canal, contracting the width of water-way at that point. This slide has been greatly assisted, if not caused, by the deposits of debris of the stone quarry, which has been placed on the side of the hill. There is also a county road maintained over this movable, sliding material, which contributes largely toward pushing this mass into the canal. At this place the dredge has been used on four different occasions during the season, and still at this time the canal is in as bad condition as when it was first dredged out.

North of Portage summit all of the levels between lock No. 14 and Peninsula lock have been dredged out. About one-half of the Pinery feeder dam was rebuilt and the slope of the dam re-sheeted. A stone abutment on one side of the dam was also rebuilt.

At the Akron locks the cribbing has been rebuilt, and three new bridges.

A new change bridge was constructed at Clinton.

Six hundred perches of protection stone have been placed on the canal embankment at different points between Cleveland and Bolivar.

The Sandy aqueduct was repaired and replanked.

The Roscoe aqueduct had one pier rebuilt, and otherwise repaired.

Sandy dam was repaired and graveled.

Sugar Creek dam was repaired and the stone work rebuilt.

Two spans of the Frazeysburg aqueduct, with the exception of the chords, were rebuilt entire.

A new bearing beam was put into the Dresden aqueduct.

One entire span, 56 feet in length, of the Newark aqueduct was rebuilt, and two new chords put into one of the other spans, and one side of the same rebuilt.

The Black Hand dam again received extensive repairs. A large amount of work has been done on the North Fork dam and feeder, also on the Granville feeder.

The foregoing comprises but a portion of the work done on this portion of the division. In addition to the work mentioned, there were fourteen sets of new lock-gates put in, many new balance-beams, lock-gates, and bridges replanked, chambers of locks re-sheeted, wing walls of locks rebuilt, grouting of masonry, dredging, repairing embankments, etc.

On the southern portion of this division during the warm months the grass is very troublesome, and requires much labor to keep the canal clear of it.

Owing to the excellent supply of water during the entire boating season, the records of the collector's office at the weigh-lock in Cleveland show good results as to tonnage. During the dry season of 1872 the average tonnage per boat was 66 tons; this year the amount carried per boat was 76 tons. Some of the months of this year give the average as high as $86\frac{2}{3}$ tons per boat. Two boats came into Cleveland during the season loaded with coal, one of which carried 97 tons, and the other 99. During the season, at intervals, sixty-five boats were gauged, the lightest draught of any of which was three feet three inches, and the heaviest full four feet. This certainly shows the canal to be in good condition, when it is remembered that the Ohio Canal was built to have but four feet of water, and no more than four feet, on the miter-sills; and for a long period after the construction of the canal 60 tons was considered the maximum load. During the drouth of 1872, and such other seasons, when there was very little rain-fall, and but little water in the reser-

voirs, when no more than three feet could be furnished to each boat, many boatmen would then load their boats so as to draw about three feet three inches, and consequently would frequently get aground, and detain all the properly laden boats in their rear, and thus cause dissatisfaction, and the canal to receive a bad reputation.

In order to insure a full supply of water in the case of such drouth as that of 1872, and similar seasons, I would recommend to the State of Ohio to take possession of, and appropriate to its own use, all of the lakes and streams that could be made available on the Portage summit, and also such low ground as would be suitable for reservoir purposes, and thus have a large supply of water to draw from in a dry season.

The amount of coal received at Cleveland by canal was 184,984 tons, or what would be about equivalent to 18,498 car loads. The amount of iron received was 4,514 tons, the most of which was from the Glasgow furnaces, in the blackband iron region. This is comparatively a new trade, which is opening up with that region.

WALHONDING CANAL.

The ice in the Walhonding River formed to an extraordinary thickness during the winter. It broke up and passed out in February, doing great damage to dam and embankments. Owing to this, navigation was not opened until the 15th of May.

At the upper end of the canal the Cavallo dam, which is 284 feet in length, was badly breached in many places, and so injured as to require the rebuilding of the entire structure, including an abutment, which was built of new material.

The stone protection to the embankment just above the six-mile dam was taken out by the ice. This protection was 858 feet in length and ten feet in height, all of which has been rebuilt. On the southern portion, in the month of July, several bad bars were washed into the canal, which were promptly removed.

THE LOCK CONNECTING THE OHIO CANAL AND CUYAHOGA RIVER.

An act of the General Assembly authorized the city of Cleveland to appropriate to its own use a certain portion of the Ohio Canal, and to rebuild the weigh-lock and the locks connecting the Ohio Canal and the Cuyahoga River. In pursuance of this act, the Board of Public Works issued an order directing the member of the Board and the Resident Engineer in charge of division No. 1 to assume control of the building of the locks, and that the work be done to their approval and acceptance. Plans and specifications in detail were furnished for the lock con-

necting the canal and river, and the work put under contract in the spring, since which time it has been progressing rapidly, and will be finished some time during next summer. This work is of such a nature that it requires time to accomplish it in order to secure a good, firm and substantial lock. The work under construction being partially in the river, and a portion of it projecting into the towing-path of the canal, it was necessary to have the embankment well secured in order not to interfere with the navigation of the canal. After a portion of the earth was excavated, a row of square piles was driven close together, which were extended around the three sides of the site of the proposed lock, the lower and fourth side being left open. This row of piles was then held in position and the embankment supported by means of heavy strain-beam trusses placed horizontally one above the other. These trusses were then firmly bolted to heavy wall-pieces. In the interior, and ten feet distant from the first-described row of piles, was a second row. In this row the piles were also driven close together, and in addition sheeting-piles were driven. This space between the two rows of piles was then properly filled with clay, and constitutes the coffer-dam. The space within the interior was then dredged out until a depth of seventeen feet of water was procured, and logs and drift-wood removed. Bearing or foundation piles were then driven. The material in which these piles were driven was found to be variable; in places it was hard, and in other places very soft; consequently the first estimate for bearing-piles was not sufficient by about two hundred. The foundation-piles were cut off ten feet under the surface of the water. The fourth side of the coffer-dam, at the lower end of the lock, will be put in, and the entire interior space pumped out. A concrete wall, extending across the head of the lock and to a depth of four feet below the foundation-timber, will be put in to prevent filtration under the lock from the higher to the lower level. In addition to this, there is a tight row of piles under each gate, extending across the lock, and sheeting-piles driven on the upper side of each row. There is also a row of piles driven close together, extending around the entire lock foundation, upon which the exterior portion of the masonry will rest. This row will also have sheeting-piles driven on the interior. The number of foundation-piles will be about 1,029, and about the same number have been driven in the coffer-dam and for protection. These piles will average very nearly thirty feet in length, and no pile has been permitted to go into the work that was less than ten inches in diameter at the small end. The space between the foundation piles will be puddled to within a few inches of their tops, and from that point to the plank upon which the masonry rests will be filled

with concrete. Upon the tops of the rows of piles, running lengthwise of the lock, is to be placed 12x12 inch timbers, thoroughly bolted to the piles. At right angles with these last-mentioned timbers is to be placed a second course of 12x12 inch timbers, laid nine inches apart, and bolted to the first course; and upon this second course is four-inch plank, and upon this plank the masonry rests. The masonry will be twelve feet eight inches in thickness at the base, and on the exterior of the wall will step off toward the top; the batter of the walls in the chamber of the lock will be three-eighths of an inch per foot; on the exterior will be a frost batter, commencing with the coping and extending to a depth of six feet. There will be thirteen courses of stone—four courses of twenty-four inches in thickness, four courses of twenty-two, four courses of twenty, and the coping, fifteen inches in thickness. The wing walls at the lower end of the lock curve back with a radius of twenty-seven feet four and one-quarter inches, and at the upper end of the lock with a radius of six feet.

The length of the lock will be one hundred feet in the clear between gates, and seventeen and one-third feet in width at the river level. In an ordinary stage of water there will be seven feet on the miter-sill, and the lift of the lock will be about fourteen feet. The amount of water upon the miter-sill and the lift of the lock will depend a great deal upon the water in the river and the lake. A north or south wind, blowing two or three days successively from the same direction, will affect the height of the water very materially.

Although there are many improvements in the manner of building locks, such as the manner of filling lock chambers, improved methods of constructing gates, hollow quoins, etc., yet, in order to secure uniformity, it was deemed advisable to construct this lock somewhat upon the general plan of the other locks of the Ohio Canal.

A wrought-iron truss bridge of two spans is being placed over the canal at the weigh-lock. It is a neat structure, and will answer all the purposes for which it is intended, although, owing to the formation of the ground at that point, the approaches will be somewhat difficult.

The Mayor and Board of Improvement and City Engineer, B. F. Morse, of the city of Cleveland, appreciating and recognizing the fact that the canal is a great auxiliary to the business interests of the city, seem disposed to do all in their power in assisting to secure good, honest, and substantial work in the construction of the locks, and in doing such other work that, if the plans are carried out as proposed, will leave the Ohio Canal at that point in as good, and, in fact, in far better condition than they found it.

WESTERN RESERVE AND MAUMEE ROAD.

During the past year there has been a large amount of work done on this road that will be of a permanent and substantial nature. Eight bridges have been almost entirely reconstructed; nearly all the old timber abutments were taken out and replaced with substantial stone work. Many of the other bridges on the road have been replanked and otherwise repaired. The hydraulic bridge at Perrysburg has received extensive repairs, and is now a firm and substantial structure.

Owing to the comparatively small amount of tolls received, it is necessary to use a good deal of economy and discretion in the expenditure of the revenue, in order to secure the best results in keeping the road in good condition, and improving it a little each year, as it is a long line of road to maintain on so small an amount of money.

Along the line of the road—at least on a great portion of it—during the winter months, when the ground is frozen, a large amount of lumber, such as logs, railroad ties, etc., is delivered on the roadside. Then, when the country becomes like a sponge, and is almost impassable (with the exception of this road), all of this lumber will be moved over it in large, heavy loads, and in this manner it is cut up and injured very much.

During the past season there have been 175 cords of broken stone and 625 loads of gravel placed on the road.

That old, dilapidated structure, the Fremont bridge, is about in the same condition it was at last report.

Statements of the receipts and expenditures, in detail, for the year ending November 15, 1875, are herewith respectfully submitted.

W. S. WILLIAMS,
Resident Engineer.

REPORT OF THE RESIDENT ENGINEER OF DIVISION No. 2.

TO HON. M. SCHILDER,

Member of the Board of Public Works, in charge of Division No. 2:

The following statement of the condition of the second division of the public works is respectfully submitted:

SOUTHERN PORTION OHIO CANAL.

That portion of the Ohio Canal between Hebron and Lockbourne was closed by the ice about the middle of December, 1874, and remained so closed until the middle of March, 1875, when navigation was opened with a good stage of water in the reservoir and on the levels. On the 15th of May the water was drawn from the levels for the purpose of making the usual spring repairs to the locks, removing bars, etc., and was kept off ten days. With this exception, there has been but little interruption to navigation on this part of the canal since the 15th of March. The locks were thoroughly overhauled and repaired, wickets cleated, miter-sills adjusted, the bars, where washed in during the winter and spring, removed, and all put in good condition for the summer.

Notwithstanding the continued heavy rains and disastrous freshets during the summer, but one heavy breach occurred on this part of the works, and that on the 4th of July, in the Walnut Creek bank, just above the Basil dam, taking out fifty feet of the bank to a depth of ten feet. This breach cut off the supply from the Basil feeder, but, as there was abundance of water in the reservoir, it did not interfere with navigation. This breach was repaired as soon as the water in the creek would permit, and was protected on the inside with stone the entire length of the breach. During the month of July the flow into the reservoir was continuous, and part of the time it required the utmost capacity of the waste-weir to pass off the surplus water and prevent it from overflowing the banks. Many bad bars were washed into the canal, which were promptly removed. Some breaches were made in the embankment of the Kirkersville feeder, and the feeder, at places, badly filled up. At various places along the canal the banks were overflowed and badly washed and cut, all of which were repaired. One side of the deck of the Lockville guard-lock has been removed, and a new and substantial change-bridge built across the canal at Carroll. A good deal of work has been done in the

way of raising and strengthening the banks along the line. The aqueduct across South Fork Creek, near the reservoir, is to be rebuilt the coming winter, and material for the work is now on the ground.

From Columbus to Tomlinson's dam, the water was drawn from May 15 to June 3, for repairs, and from Tomlinson's to Portsmouth, from the 7th of July to the 23d, for the same purpose. The freshet of July caused a great deal of damage to this part of the division. In the vicinity of Circleville, nine breaches were made from fifty to one hundred and twenty feet in length, and from six to twelve feet deep, and also destroying the short level between the two locks two miles below Circleville, by filling it up to the top-water line; also depositing material on the eighteen-mile level to a depth of from eight to ten feet, for a distance of two hundred feet, just above the lower lock, and destroying the bridge over the feeder.

At Christy's bridge, near Sharonville, a breach was made about seventy feet long, and to the depth of the bottom of the canal.

Quite an amount of dredging was done on the eighteen-mile level, between Circleville and Chillicothe; also on the feeder level at Tomlinson's dam, and on the Waverly level.

The aqueducts at Circleville, Paint Creek, Waverly, and Sunfish Creek were all repaired. At Yellowbud a new aqueduct was made, and at Brush Creek an entire new trunk, one hundred and twenty-five feet long, was put in.

The high waters of the Ohio and Scioto rivers deposited eight feet in depth of debris in the outlet-lock at Portsmouth, which was washed or flooded out.

Repairs were made to a great many locks, gates, etc., along the whole line, and navigation was very good during the season, except when a break occurred during the rainy portions.

At Columbus the lower abutments of the locks were put in entirely new. The crib, or main part of the dam, at same place, has been filled; eighty-five feet of new sheeting put in; and a new crib, on the east side of the dam, joining the stone abutment, was also put in.

At Circleville two new cribs, joining the stone abutment, one on each side of the river, were made.

HOCKING CANAL.

On this canal navigation was closed and opened again about the same time as on the Ohio Canal, mentioned before. The water was drawn, and the usual spring repairs made in early spring. Navigation was good until July, when the floods of that month threw in some bars, but they

were speedily removed. Afterwards, on the 1st of August, the flood of 1875, on the Hocking, caused serious damage by breaks, fills of deposits, etc. There were, large and small, twenty-three breaks—some very serious ones—and at one or two points the canal was filled up to near top-water line with deposits of sand, coal-slack, and muck. All of the breaches were promptly repaired, the canal bottomed out, and navigation resumed in the space of forty days. A large amount of dredging was done, several new lock-gates were put in, and other repairs made in such a manner as now affords the best of navigation throughout its length. This canal is in as good order, if not better, than before the flood.

MUSKINGUM IMPROVEMENT.

The water was drawn at Zanesville the second time during the season, for the purpose of removing deposits caused by washing from the streets, etc., during the rainy season. The dam at this place was damaged by ice and drift during the winter, which made it necessary to rebuild about one hundred feet of foundation crib and lower apron to it.

At Taylorsville considerable work was done in removing sand-bars, caused by the heavy rains. The water was drawn the second time, at this place, to remove them. A wing-dam was built across Duncan's Run, changing the course of said stream, to prevent damage to the lock by cutting through. One new crib was built at the east end of the dam.

At Rokeby navigation was closed one week in October, in consequence of the miter-sill at the head of the lock giving way. The dam was repaired with new sheeting, etc.

At Windsor the dam was injured so much that it was necessary to rebuild one hundred and twenty feet of foundation crib and breast to it.

At Lowell about one hundred feet of the dam was torn out by drift and ice, but was repaired. The canal was bottomed out to the depth of four and one-half feet.

At Harmar the lock was repaired by putting in arched protection-wall, so as to relieve the inside wall from the weight of the bank.

At Duvall, Beverly, Luke Chute, McConnelsville, and Symmes Creek, the usual repairs to dams, cribs, locks, etc., were made. Navigation is good on the entire line.

Respectfully submitted,

A. J. CRYDER,
Resident Engineer Second Div. Public Works.

REPORT OF THE RESIDENT ENGINEER ON DIVISION NO. 3,
MIAMI AND ERIE CANAL.

To P. V. HERZING, Esq.,

Member of the Board of Public Works, in charge of Division No. 3:

I present you the following report, exhibiting the condition of that part of the public works under your charge :

SUB-DIVISION NO. I.

The Miami and Erie Canal was not closed until about the first of January of the present year.

On the 6th of March boats commenced running from Middletown to Cincinnati, and on or about the 10th from Dayton.

In January and February several breaches were made in the canal banks, caused by ice freezing solidly thereto, and when the levels were raised by letting on the water, the top of the bank, by the raising of the ice, was lifted up from below top-water line, or to the depth of the frost, and the water passed out, causing breaches. This was done at Amanda basin, near the Clear Creek aqueduct, and at three points on the six-mile level, near the fair grounds, below Dayton. Water was drawn from the canal, two weeks in May, for repairs, during which time several sets of new lock-gates were put in; also, four new miter-sills, and the usual repairs made to locks and aqueducts.

The stone-work at the lower end of lock No. 39, at the north line of Hamilton county, was taken down and rebuilt. The lock at the "Rialto Mills" was partially re-sheeted, the breast repaired, and considerable grouting done.

Gregory's Creek aqueduct trunk was raised, replanked, and new wings of wood placed at the ends.

The stone-work of the lock at the Middletown feeder was repaired, and a new wooden tumble put in at the "Vannest lock," being the next north of the feeder-lock.

On the 2d of June a heavy rain set in, causing two extensive breaches in the canal at the Bluffs, near Dayton, together with several smaller ones, and innumerable bars were washed in.

From Dayton to Middletown the canal was very much injured. The injuries were repaired, and boats commenced running on the 16th of June. After that other storms came, and bars were formed more numerously than before.

On the 4th of July a waste-weir was washed out on the Franklin level, two or three feet below bottom, and earth washed in as extensively as before. From the 17th to the 28th of July, two dredges worked fourteen hours a day each, removing deposits, at which time heavy rains again took place, and the canal was filled almost full in places, particularly on the Franklin level.

On the 1st of August the water of the Miami River passed into the canal at Dayton, Middletown, and below Amanda, causing four breaches at Middletown and a large one three miles below Amanda. This flood filled the lower lock at Franklin about five feet deep with stone, sand, and gravel, and made many bars all along the canal from Dayton to Cincinnati.

One of the piers of the Mad River aqueduct was undermined. It was taken down at the upper end and rebuilt, and repairs made to the superstructure.

One culvert on the twelve-mile level was injured and repaired.

The Mad River dam was much injured, about one-third of the crib giving way. It was repaired and newly sheeted.

The levee at the north end of the Middletown dam, on the Banker farm, was broken in two places, and about ten thousand cubic yards of earth carried away. This levee gave way when the water was nearly two feet below the top of it. For a few days it looked as if the canal was about to be destroyed.

SUB-DIVISION NO. II.

On this sub-division the water was drawn on the 15th of May for repairs, and was kept out ten days, during which time eleven wooden locks north of the summit were repaired with bank braces, new posts, and new decks; put in a pair of new gates at lock one, at Bremen, and four pairs in the locks south of the summit, and span of fifty feet was rebuilt at Loramie's Creek aqueduct.

Lock sixteen, south, was grouted with hydraulic lime, and some repairs made to all the locks.

Navigation remained good until July, when the floods took place. Five large breaks were made in the banks near Tippecanoe, and nineteen large bars were thrown into the canal. These were removed by men with wheelbarrows. Over one hundred men were employed eight days removing the same. Since the water was let in navigation has been good.

All the necessary timber is on hand for repairing the trunk of the Miami aqueduct.

Before the flood came the dredge was employed on the Sidney feeder, where it was doing good and much-needed work. Since then it has been constantly at work south of the summit, on the lower sub-division.

The abutment walls, on the river side, at the feeder-gates at the mouth of Loramie's Creek, were repaired with heavy stone. The feeder-dam at this place was injured by heavy ice, which tore off a part of the top. The damage was repaired.

The three reservoirs on this division were full on the opening of navigation, and remain so at this time.

Although much damage was done to the canal by the breaking of banks and by the washing in of innumerable bars, particularly between Piqua and Cincinnati, boats are now passing along, drawing three feet of water, without difficulty.

The Sidney feeder and the Summit level to Bremen received no particular damage, as the rain did not fall on the summit so extensively as below. Four or five feet were maintained on that part of the canal all the season, and also as far as Spencer, where the five-foot depth of water ends.

SUB-DIVISION NO. III.

On this sub-division three wooden locks were rebuilt, being locks 22 and 25, north of Spencer, and lock 6, west of Defiance. The aqueduct at Blue Creek was also rebuilt.

New miter-sills were put in at the Providence guard lock, to do which a steam pump had to be used. The miter-sills of several other locks which had raised were repaired and spiked down.

Eleven pairs of new lock-gates were put into locks.

Independence dam was planked anew with three-inch plank.

The towing-path on Defiance slack-water was protected in many places with stone.

All the locks at Toledo were grouted with hydraulic cement, and are now in fair condition.

All the locks on this sub-division received some repairs, and at the Providence guard-lock a new platform or bridge was erected.

This part of the canal is in good condition, and boats heavily laden pass along without difficulty.

PROVIDENCE SLACK-WATER.

Since the work of deepening the river channel, by blasting out the rock, was transferred to the Board of Public Works by the special commissioners appointed by the Governor, the work has progressed slowly

the past season, owing to the many disasters which befell the coffer-dam. The high floods during a part of the year overflowed the dam, causing great delay, after which leaks occurred, which caused a suspension of the work for a time by the filling of the coffer. The leaks were closed and breaches repaired at much expense and delay to the work.

Under the special commissioners, Smith, Hays & Co. received the following payments, to wit:

October 1, 1873, estimate for.....	\$1,104 75
February 1, 1874, “	1,305 00
April 1, 1874, “	900 00
Total	<u>\$3,309 75</u>
June 25, 1875, P. V. Herzing, check.....	\$1,000 00
September 23, 1875, P. V. Herzing, check	1,639 75
Paid by P. V. Herzing	<u>2,639 75</u>
Total amount paid to Smith, Hays & Co.....	\$5,949 50
Paid to O. E. M. Howard, engineer	\$972 50
Paid to Geo. E. Wilsted, engineer	78 00
	<u>1,050 50</u>
Total amount paid, which exhausts the appropriation	\$7,000 00

Of the \$972.50 paid to O. E. M. Howard, under special commissioners, \$40.50 were paid for hand-bills and for advertising. The \$78.00 paid to George E. Wilsted were for services as assistant engineer or superindendent during the past summer. There will be due Smith, Hays & Co. for work done, upon the completion of the rock excavation inside of the present coffer, a considerable amount. This work is now done, or will be in a few days, if their dam meets with no disaster, for which there is no appropriation.

In November and December of last year, Smith, Hays & Co. were required by the special commissioners to proceed with their work, and were ordered to erect a coffer-dam, commencing at the north end of the “rip-rap” embankment, which connects with the dam abutment, and to run it up the river several hundred feet. This they did in a season of great inclemency, at a cost of \$1,650, which proved to be a total failure. The fragments of the dam were removed during the past summer, as they were a very serious impediment to navigation. That part of the work now finished was to have been *six feet* below the top of the Providence dam, but on account of the layers or courses of rock being heavy, they were blasted and taken out from one to two feet below bottom, thus giving a greater depth of water than six feet. That part below bottom was not included in the measurement.

To complete the remaining 900 lineal feet of rock excavation, without

interfering with navigation, will require the canal to be moved northward a few hundred feet to where it enters the pool of the dam. This will involve, as extra work, the removal of about 5,000 cubic yards of earth more than would be necessary if kept in the pool of the dam. This change would throw the canal about 75 feet north of the river, and for several hundred lineal feet it would occupy an old basin site, now partially filled with mud. The entrance or mouth of the present canal could then be closed, which would almost entirely exclude drift-wood and floating ice, which often interfere with the feeding-gates and guard-lock below.

This work, when once well done, will be of incalculable advantage to navigation, and Providence slack-water will be no longer an annoyance to boatmen and shippers. Had the rock been removed years ago, as now contemplated, it would have greatly benefited the State in the increased receipts of tolls.

In seasons of low water, boats arriving at the "slack-water" had to be "lighted" over the rocky bed of the river, where the water was often not more than two feet deep. Since the new dam was built it is better.

To pay the contractors for what has already been done, and to finish the work as contemplated, will require, according to the estimate I have made, the further sum of \$12,000.

LEWISTOWN RESERVOIR.

In accordance with instructions, I proceeded to the Lewistown reservoir, in company with Henry C. Moore, Esq., a competent engineer and surveyor, resident of Bellefontaine, to examine into the question of alleged damages to lands, and after having fully examined the reservoir, by passing around it and personally inspecting many of the tracts, so as to become familiar with their location and condition, we commenced at top-water line and traced it carefully, setting stakes at all proper points along that line. After that was done, Mr. Moore, who was familiar with the survey and field-notes, was employed to ascertain what land was in the reservoir below top-water line, and the following is the result as to the tracts surveyed:

Dennis Cox	13.35	acres in military survey	12,311 and 12,278.
James Ewing	7.88	"	12,311 and 12,278.
same,	6.01	"	12,311 and 12,278.
Lafayette Stamate.....	58.90	"	12,277.
Jamison & Couch.....	38.97	"	12,277.
Richard Warwick.....	8.70	"	12,277.
Reuben Warwick	13.73	"	12,277.
Robert Warwick.....	0.88	"	12,277.
John Snodgrass.....	0.10	"	12,277.
Wilson Rose.....	68.08	"	12,277.
Hugh Beatty	75.38	acres in sec. 23, T. 6, R. 23, east.	

I have not been able to find any documents to show what amount, if any, of the above-mentioned tracts was condemned heretofore; and Mr. Moore, who examined the Logan county records, informs me that he could not find any title in the State on record for any of the land for which Hugh Beatty, John Snodgrass, Wm. Rose, either of the Warwicks, George Jamison, or the Stamate heirs have made application for damages. John Archer's tract, in military survey 9,987, containing 159.64 acres, twenty acres of which are said to be injured in an aggregate sum of \$2,400, with annual damages to the extent of \$240, we examined. We found, from the top of the river bank, east of the line between him and John McKee, to top-water line of reservoir, a fall of *five feet*, and from same place to top of waste-weir a fall of *eight feet*, as the waste-weir now is near the bulkhead. The river at his west line is from twenty-five to thirty feet wide, and three feet deep from top of bank. It would be a matter of impossibility for his lands to be injured by the backwater of the reservoir. Mr. Stamate claims that the reservoir prevents him from reclaiming his wet land on the east by draining. In order to satisfy myself that he was mistaken, Mr. Moore and myself took the level between his low lands and top-water line at the "prairie," and found over three and one-half feet of fall in about forty rods. Many claim that, in times of heavy rains, the water "piles up" on the east side of the reservoir, where the Miami River enters it. This is true, but it lasts but a short time after the rain ceases. West of John McKee's land the river loses its bank, and the water spreads over a flat of nearly one-eighth of a mile in width, without channel, and is covered with an immense amount of fallen timber, which continues nearly two miles, down to what was called "Indian Lake," and this fallen timber forms a barrier sufficient to make the water "pile up" for several hours, and sometimes days, after the rain ceases. The waste-way, however, soon draws away the superabundant water and restores the level.

Top-water line, as run by the undersigned in 1856 or 1857, is 14.10 feet above the top of the plank foundation in front of the discharging gate at the bulkhead. When the water is on a level with the top of the present waste-weir it stands eleven feet and one-tenth of a foot on the timber foundation before mentioned, and three feet below the established top-water line. The waste-weir was reduced one foot in height by order of John L. Martin, then an acting canal commissioner, in order to prevent too much pressure against the embankment, or to prevent the water from getting over the same during excessive floods. Before the waste-weir was lowered the water of the greatest floods *at no time* raised the surface of the reservoir to top-water line, and as the waste-weir now is it would

be *impossible*, with such rains as have prevailed during the last fifteen or twenty years on the head-waters of the Miami, to elevate its surface to top-water line, as traced by the undersigned. Whether I am right or wrong in the assertions above made can be very easily ascertained by having the water line well marked during a heavy flood, when a large body of water is passing over the waste-weir. The waste-weir is six hundred feet long, and calculated to discharge, in a very short time, all the flood water of the north and south forks of the Great Miami River (both of which enter the reservoir) during excessive rains.

Now, if the State would remove all the timber from below the west line of John McKee's land down to "Indian Creek," from off a space three hundred or four hundred feet wide, so that the water of the north fork could pass into the reservoir freely, there would be then, in my opinion, no cause for complaint on account of backwater from the reservoir.

To clear a channel, or track, of the width named, for the north and south forks, could be done for a sum not exceeding *fifteen hundred dollars*, and I believe it would remedy the evil complained of. I therefore recommend that plan to you as a remedy. For further information on this subject, I refer you to the annual report of the Board of last year.

Respectfully submitted,

JOHN W. ERWIN,
Resident Engineer.

THE WESTERN RESERVE AND MAUMEE ROAD.

STATEMENT EXHIBITING THE AMOUNT COLLECTED BY THE SUPERINTENDENT BY THE ORDER OF THE RESIDENT ENGINEER EACH MONTH, FROM NOVEMBER 1, 1874, TO OCTOBER 31, 1875, AT THE DIFFERENT TOLL-GATES ON THE WESTERN RESERVE AND MAUMEE ROAD FOR TOLLS, FINES, ETC., ON SAID ROAD, AFTER DEDUCTING SALARIES OF GATE-KEEPERS.

No. of Gate.	GATE-KEEPERS.	Nov.	Dec.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Totals.
1	H. R. Charles.....	\$43 66	\$70 60	\$40 01	\$32 38	\$66 87	\$55 56	\$47 03	\$92 98	\$34 72	\$73 80	\$96 21	\$27 54	\$681 36
2	Isaac Giddings.....	32 14	36 65	26 03	14 14	33 21	25 12	23 15	20 01	19 74	27 73	34 79	33 36	326 07
3	J. H. Kotterhus.....	18 10	18 27	11 25	10 99	21 59	22 14	15 38	29 50	16 86	24 27	25 43	31 43	246 21
4	Wallace Knight.....	57 64	86 04	60 24	36 89	80 74	.....	.....	.....	.....	.....	.....	.....	.....
4	Alford Lilley.....	.....	.....	.....	.....	.....	110 47	109 77	113 70	84 60	101 70	122 71	102 52	1,067 02
5	C. Binkley.....	94 35	99 22	73 08	69 37	70 97	98 54	89 15	129 92	113 87	108 72	111 30	135 35	1,193 84
6	Jenny Lynn.....	35 45	29 83	6 45	1 26	17 78	.....	.....	.....	.....	.....	.....	.....	.....
6	C. Collier.....	.....	.....	.....	.....	.....	20 06	34 48	63 00	38 34	58 62	62 30	43 59	411 16
7	Emma Pike.....	31 96	53 46	24 10	31 32	36 12	58 18	52 75	52 16	43 02	41 55	60 71	48 30	533 63
														\$4,459 29

TOTAL RECEIPTS.

Amount collected as above..... \$4,459 29

TOTAL DISBURSEMENTS.

Miscellaneous vouchers (see exhibit) paid Treasurer of State..... \$4,459 29

Balance in State Treasury November 15, 1874..... \$900 00

Balance in State Treasury November 15, 1875..... 900 00

Respectfully submitted,

W. S. WILLIAMS, Resident Engineer.

STATEMENT OF EXPENDITURES

OF THE THE RESIDENT ENGINEER OF THE WESTERN RESERVE AND MAUMEE ROAD FOR
THE YEAR ENDING NOVEMBER 15, 1875.

Date.	No. of voucher.	To whom paid, and on what account.	Amount.
1874.			
Nov. 22	1	James Gibson, in part for unbroken stone, delivered	\$15 00
26	2	P. H. Nickleson, in part for broken stone, delivered	7 39
28	3	Thos. Gorrill, in part for broken stone	25 00
Dec. 7	4	A. M. Foster, for moving toll-house No. 5	54 50
18	5	Chris. Binkley, for repairing toll-house No. 5	1 50
	6	Wm. Norris, in part for teaming	20 00
	7	J. Dellane, for 13½ days' work	20 75
	8	T. Smith, for plastering toll-house No. 5	10 00
	9	Joseph Frank, for 6 days' labor	6 00
	10	Ira Smith, in part for work	75 00
19	11	J. Kotterhus, in part for broken stone	18 10
26	12	P. W. Nickleson, in full for 11 19-128 perches of broken stone, delivered	48 07
27	13	J. Fork, in full for breaking stone and 9½ days' work	8 87
1875.			
Jan. 9	14	C. H. Malkenbur, for 10 loads of stone	1 25
20	15	John Lynn, for repaiaing bridges	4 00
21	16	J. Dellane, for 23 days' work, at \$1.50 per day	34 50
	17	West & Dana, in part for lumber (bridge)	50 00
	18	Wm. Norris, in full for teaming up to date	14 50
	19	Ira Smith, in part for work	70 00
22	20	Conklin & Co., for 1 day teaming	3 00
Feb. 5	21	H. R. Charles, for breaking stone and repairing bridges ..	26 75
19	22	W. Miller, repairing toll-house No. 2	15 00
20	23	H. L. Wood, Jr., in full for work up to date teaming	84 00
March 4	24	J. Kotterhus, in part for breaking stone	22 24
	25	G. Richards, 2 days' teaming	6 00
5	26	D. L. June & Son, 381 loads of stone at pit, and stone and lime for repairs on toll-house	78 85
	27	Ira Smith, in full for work up to date	41 20
8	28	J. H. Pierce, bill of lumber for repairing bridges	2 78
9	29	S. Gorrill, in full for teaming up to date	33 00
April 4	30	J. Kotterhus, in part for breaking stone	21 59
6	31	George Wright, in part for broken stone, delivered	40 00
	33	Henry Beekler, 6 days' teaming	18 00
9	34	J. Swartz, 8 days' labor loading gravel	12 00
	35	A. Newcomber, roofing and repairing toll-house No. 5	42 00
10	36	Ira Smith, in full for work up to April, 1875	25 00
	37	West & Dana, in part for bridge lumber	26 00
26	38	George Wright, in full for 8½ cords of broken stone, deliv- ered	9 50
May 3	39	Thomson & Co., nails and spikes for repairing bridges	7 72
4	40	S. Baker, 105 loads of gravel in pit	13 80
5	41	Ira Smith, for teaming and other work up to May 1, 1875 ..	56 25
	42	I. M. Keeler, agent, insurance on Fremont bridge	270 00
	43	J. Kotterhus, in full for 17 cords, and for 5 50-128 cords of unbroken stone	15 21
1	44	H. C. Lawrence, for hauling 34 loads of gravel, and for gravel in pit	34 00
	45	W. & K. Hollenbeck, for teaming	5 75
June 11	46	H. R. Charles, for rebuilding bridge walls	36 90
	47	H. Hagermaster, for blacksmithing	4 40
21	48	A. Lilley, for 6½ days' labor	9 37
	49	Wm. Boush, for 5 days' work in May	7 50
22	50	Thomas Hare, for 7 days' hauling stone	21 00

STATEMENT OF EXPENDITURES—Continued.

Date.	No. of voucher.	To whom paid, and on what account.	Amount.
June 22	51	H. Beekler, 6 days' teaming and repairing bridge	\$20 00
	52	E. Grovner, for 83 loads of gravel in pit	10 62
	53	Ira Smith, teaming and other work in May, 1875	94 93
	54	West & Dana, in full for bill of lumber for repairing bridges	34 19
	55	G. Greiner, for 3½ days' teaming	10 00
July 7	56	G. Estings, for 4½ days' teaming	13 50
	57	H. Samson, for 2 days hauling stone	6 00
	58	P. Cherry, for 5 days breaking stone	7 50
	59	H. L. Wood, in part for teaming, repairing bridges, side road, and breaking stone, etc., and bridge lumber, in 1874 and 1875	396 44
	60	J. Barramen, for 1 day's teaming	3 00
	8	61 Wm. Norris, for 4 days' teaming	12 00
		62 Ira Smith, in part for teaming and other work	40 00
	9	63 J. Pierce, for lumber for bridges	21 3
	17	64 S. P. Gorrill, for 5 days' teaming up to date	17 50
	22	65 W. Bean, for balance due on broken stone	5 50
	29	66 L. Gorkins, for 9 cords of unbroken stone	27 00
Aug. 11	67	H. L. Wood, Jr., in full for work on road up to date	73 00
	12	68 Wm. Keil, for tools and spikes for bridges	12 50
	69	Fred. Gefeller, blacksmithing, and for one sledge and ham- mer	9 50
	28	70 E. Kellogg, in part for rebuilding bridges	75 00
Sept. 2	71	Alfred Lilley, for plastering toll-house No. 4	10 50
	72	J. S. Van Ness, for 2 loads of sand for plastering toll-house No. 4	2 00
	3	73 H. Baker, for 6½ days' teaming	19 50
		74 Peter Cherry, for 4 days loading gravel	6 00
		75 C. Cleaveland, for 6½ days hauling gravel	19 50
		76 Allen Bass, for 7¼ days loading gravel	11 25
		77 J. Bothman, for stone and work on road up to date	7 00
		78 G. Glanchn, for 3 days breaking stone	4 50
		79 C. Smith, for 4½ days breaking stone	6 38
	4	80 H. Cornelius & Co., for breaking and hauling stone up to date	87 75
		81 Wm. Norris, for 6 days' teaming	19 50
		82 J. Dellane, for 8 days' work up to date	12 00
		83 Ira Smith, for work teaming and repairing bridges in June, July, and August, 1875	158 44
	14	84 E. Kellogg, in full for 19 48-128 cords of unbroken stone, and rebuilding bridges	48 13
	20	85 Lot Brown, 20½ days' work on hydraulic bridge	30 75
		84 H. R. Charles, for amount paid for stone and lumber for hydraulic bridge	31 40
		87 H. R. Charles, for paying different men for work on hydrau- lic bridge	65 47
		88 H. R. Charles, in part for work	11 66
		89 E. Tates, for 20 days' work on bridge	25 00
		90 John Charles, in part for work	20 00
		91 T. Carolen, 31 days up to date on bridges	41 25
		92 E. Collier, in part for 31½ days' work	33 20
		93 B. Donaldson, in part for work	12 00
		94 E. Oconerin, in full for work up to date	11 40
	23	95 C. Collier, for paying 4 bills for work—P. Cherry, \$9.00; J. Whitmore, \$21.50; and \$7.50 to Wash. Brown	39 00
		96 Ira Smith, balance due for work in August, and in full for work in September, 1875	150 50
		97 J. Dellane, for 5 days breaking stone	7 50
		98 S. Buckland & Son, for stationery	70

STATEMENT OF EXPENDITURES—Continued.

Date.	No. of voucher.	To whom paid, and on what account.	Amount.
1875.			
Sept. 23	99	H. R. Charles, bills paid different men for work on bridge .	\$57 86
Nov. 2	100	A. Lilley, paid G. Richards and I. Smith for work	11 13
	101	H. R. Charles, for paying different hands for labor on hy- draulic bridge.....	65 89
	102	H. R. Charles, for paying in full for the work and mate- rials for rebuilding the hydraulic bridge at Perrysburg..	110 73
	103	H. R. Charles, in part for work repairing bridges.....	37 54
	104	Peck, Hamilton & Co., for bill of tools and iron and spikes, nails, etc., for repairing bridges	44 46
4	105	H. L. Wood, in part for teaming.....	7 00
	106	J. C. Wood, for copying report	3 00
	107	James Gibson, for 28 $\frac{3}{4}$ cords unbroken stone, delivered.....	86 00
	108	H. L. Wood, one year's salary as superintendent	800 00
		Total.....	\$4,459 29

REPORT OF RESIDENT ENGINEER OF THE NATIONAL ROAD.

HON. R. R. PORTER, *President of the Board of Public Works*:

SIR: I respectfully submit the following report of my transactions as Resident Engineer of the National Road for the last six months of the current year; also of my predecessor for the six preceding months, commencing November 15, 1874:

Received from tolls at gates for year ending November 15, 1875.....	\$16,845 20
Received from all other sources	419 92
	<hr/>
	\$17,265 12
Disbursed as per vouchers on file in State Auditor's office.	\$15,957 96
Engineer's salary for year ending November 15, 1875	1,307 16
	<hr/>
	\$17,265 12

In taking charge of the National Road on the 15th of May, I found that there was a large debt, extending over the whole line of the road, that had been accumulating for the last three or four years, amounting to over \$5,000. I found it necessary to adopt some plan to liquidate this debt and keep the road in reasonable repair. I commenced by paying promptly all expenses from and after the first day of May, and all excess after each monthly payment has been divided as nearly as possible on the old debts, of which I have paid, up to this time, \$1,607.11. I think with economy and careful management the road can be kept in as good or better condition than it has been for several years, and this debt paid off, or nearly so, in the coming year.

There has been a crib-pier built at the Muskingum River bridge, at a cost of \$707. In the breaking up of the ice in the river last spring, one of the piers of the bridge was nearly battered down. This crib will make it more durable than the original pier. This might really be considered an extraordinary repair.

There has been put on the road, during the last six months, five hundred and fifty rods of broken stone and over two miles of well screened gravel, which is really more durable than a majority of the limestone generally used. Several culverts have been repaired, drains opened, breeches mended, and all work that could be done with the receipts under the peculiar circumstances in which the road has been placed.

The order of the Board of Public Works on the subject of collecting

tolls between gates has been sustained by the court, and all gate-keepers are ordered to collect accordingly.

I find a deficit in the accounts of my predecessor, W. R. Ritts, in the National Road fund, of \$879.65. His bondsmen are perfectly good for the amount, and the papers have been placed in the hands of the Attorney-General for collection.

The Alum Creek bridge is in a very dilapidated condition. It has been repaired by bracing and putting in iron bolts for several years. I think it can hardly last another year, as some of the main timbers and braces are broken. I have made a proposition to the Commissioners of Franklin county, that if they will pay one-half the cost of a new bridge, the National Road will pay the other. If the Board of Public Works approves it, we will have it built the coming season. The span of the bridge is one hundred and fifty feet, and it will cost about three thousand dollars.

All of which is most respectfully submitted.

S. R. HOSMER,
Resident Engineer National Road.

STATEMENT EXHIBITING THE AMOUNTS COLLECTED BY THE RESIDENT ENGINEER

IN EACH MONTH, FROM NOVEMBER 1, 1874, TO OCTOBER 31, 1875, AT THE DIFFERENT TOLL-GATES ON THE NATIONAL ROAD FOR TOLLS, FINES, ETC., AFTER DEDUCTING THE SALARIES OF GATE-KEEPERS.

	NAME OF GATE-KEEPER.	1874. Nov.	1874. Dec.	1875. Jan.	1875. Feb.	1875. March.	1875. April.	1875. May.	1875. June.	1875. July.	1875. Aug.	1875. Sept.	1875. Oct.	Total f'm each gate.
1	Isaac Davis	\$181 24	\$163 19	\$114 64	\$103 36	\$156 08	\$117 10	\$169 76	\$160 68	\$183 00	\$196 37	\$188 27	\$197 70	\$1,931 39
1½	Lambert M. Feltus	124 79	118 09	103 05	102 55	123 45	103 53	100 23	111 70	103 01	113 16	144 12	144 79	1,392 47
2	B. R. Nelson	100 97	86 45	81 96	55 64	96 85	76 92	97 86	88 30	86 84	119 99	111 48	82 26	1,085 52
3	Daniel Magnus	20 14	22 59	19 58	14 45	28 18	23 55	19 00	20 19	23 23	34 42	29 26	24 15	278 74
3½	Preston V. Shook	39 79	40 18	26 34	24 31	28 79	34 69	35 44	31 74	31 89	55 24	39 94	36 19	424 54
4	Simpson George	43 62	57 72	36 82	47 22	50 67	40 49	36 09	33 65	29 63	53 38	42 08	52 01	528 38
5	William Richards	46 24	55 72	49 00	44 60	55 37	40 36	36 34	37 02	50 00	60 24	53 15	76 30	604 34
5½	John Ferryman	55 00	50 80	47 40	51 25	55 00	46 00	43 87	41 00	89 00	55 80	58 00	68 41	661 53
6	David Richardson	26 56	40 60	21 00	18 53	26 06	29 49	21 36	40 31	27 34	33 08	38 64	42 07	364 44
7	David R. Bell	26 96	20 79	14 21	9 08	25 99	30 74	25 52	23 10	25 82	26 05	30 29	29 84	288 39
8	William Roberts	73 30	85 07	55 34	55 46	75 76	76 88	51 61	62 13	60 00	59 38	63 18	67 43	785 54
9	William D. Marsh	54 00	100 00	52 75	46 25	80 10	83 25	53 60	78 00	77 30	76 75	94 25	86 40	882 65
9½	A. G. Button	59 97	57 88	49 12	34 74	45 05	42 76	23 03	28 55	21 30	37 80	30 66	52 81	483 67
10	William Terry	33 00	30 00	16 00	10 28	31 00	52 00	27 00	41 00	25 00	47 00	25 00	41 01	378 28
11	Joseph Snyder	26 25	36 10	20 25	21 36	38 16	60 96	36 12	34 01	27 76	36 74	32 31	27 42	397 43
12	David Winter	23 95	47 10	31 61	24 28	52 65	74 09	33 02	39 40	46 00	38 79	38 06	43 12	492 07
12½	David Marshall	63 44	108 21	102 29	60 15	123 48	130 49	75 33	89 66	89 82	101 98	70 04	81 93	1,095 82
14	E. C. Miner	164 50	210 26	190 42	93 75	199 80	136 69	126 29	133 02	118 06	155 27	124 65	145 12	1,797 83
15	Lewis Duvall	45 35	64 85	28 60	33 60	49 15	57 60	60 35	54 05	50 35	93 20	53 85	67 35	658 30
15½	Mary E. Mills	*10 85	*13 85	*14 85	.....	44 84	12 68	15 18	13 48	16 80	13 97	16 58	21 22	154 30
16	C. C. Yardley	10 13	21 65	7 06	6 47	17 35	19 17	19 59	19 12	15 90	11 26	18 25	14 17	180 12
17	A. C. McKay	158 07	161 97	125 93	118 11	212 13	139 99	153 22	201 16	153 50	162 39	193 92	199 06	1,797 45
	Total each month	\$1,388 12	\$1,592 47	\$1,208 22	\$975 44	\$1,575 91	\$1,429 43	\$1,259 81	\$1,386 27	\$1,351 55	\$1,581 26	\$1,495 97	\$1,609 75	\$16,845 20
	From other sources	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	419 92
	Total	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$17,265 12

* L. Ballinger. † J. Ballinger.

STATEMENT OF EXPENDITURES

BY THE RESIDENT ENGINEER OF THE NATIONAL ROAD, FOR THE YEAR ENDING
NOVEMBER 15, 1875.

Date.	Number voucher.	To whom paid, and on what account.	Amount.
1874.			
Nov. 2	1	James Melvin, 1 month's labor shoveling	\$25 00
4	2	David Cussman, balance on breaking 2,072 feet limestone, at \$1.75	19 63
6	3	Peter H. Campbell, lumber, nails, and labor at gate No. 15	2 80
14	4	Michael Kelly, part pay on breaking stone	15 00
18	5	Herdman, Harlan & Co., lumber to repair wagons	4 52
20	6	Jesse Romaine, part pay for breaking stone, at \$1.50	15 00
21	7	J. T. Warder, rent of garden lot for gate No. 17	10 00
23	8	G. G. Akerly, six boxes axle grease	1 00
24	9	George Johns, 1 day's labor shoveling at Zanesville	1 50
	10	T. A. Decker, amount paid on account of boarding hands	20 75
	11	Jesse Romaine, balance on breaking 4,569 feet limestone on miles 70 and 71, at \$1.50 per 100	13 53
	12	Mary Schoff, boarding hands and keeping horses to corn	47 50
28	13	Mary I. Grubb, use of horse and buggy at Zanesville	2 00
	14	M. A. C. Smith, 5½ days' labor shoveling stone at Zanesville, at \$1.50	8 25
Dec. 3	15	Ball, Coulter & Co., lumber as per bill attached	56 83
	16	Louis Cook, 14½ days hauling stone, at \$3.50	50 75
	17	Nathan Redman, part pay on wages for November	10 00
4	18	Thomas Brown, 3 months' salary attending Zanesville bridge, at \$25	75 00
	19	Larens Moran, breaking 765 perch stone, at \$1.75; 12½ days spreading, at \$1.50	32 63
	20	Townsend Bros., 8 bbls. lime, at \$2.25 per bbl.	18 00
	21	Thomas Morton, balance on breaking 2,189 feet limestone	26 26
	22	Mikel Keley, balance on breaking 5,751 feet stone on miles 74 and 75, and 2 days' labor on road, at \$1.50	16 29
	23	Thomas Morton, 1½ days' labor on road, at \$1.50 per day	2 25
	24	T. A. Decker, 488 meals, at 20c., to December 4, 1874 (part pay)	50 00
	25	Edward B. Haver, new breast-strap and repairing hames	2 80
5	26	F. Waterman, 678 loads gravel on mile 129, at 16c.	108 48
	27	George Ballinger, balance on breaking 2,604 feet limestone	39 00
7	28	William Fry, 3,310 lbs. hay, at \$1.50 per 100	38 06
	29	Sayers Johnson, 4 days' labor cleaning and repairing Columbus bridge	8 00
8	30	R. M. Wilkins, 16 bushels corn, at \$1	16 00
9	31	Robert Clark, paid on account of delivering limestone and breaking same on mile 171	100 00
10	32	Mary Connor, part pay boarding hands	24 00
	33	Preston & Shook, furnishing lumber and building out-house at gate 9½, National Road	23 66
	34	Ralph Bolinger, part pay for delivering stone on miles 136, 137 ..	20 00
	35	James Sparks, paid on hauling 57 loads gravel on mile 113	5 00
	36	Henry C. Sly, paid on delivering limestone on mile 36	25 00
11	37	D. Brown, 10 bushels corn, at 60c	6 00
	38	E. D. Moore, one lot of limestone for National Road	1 50
	39	M. Kline, amount paid on Ridgway's order for breaking stone ..	16 00
	40	Mary Bosmer, part pay for boarding hands and horses to De- cember 1, 1874	15 00
	41	Hamilton Murphy, limestone and flagstone for culverts	12 50
	42	George Chesselle, blacksmithing as per bill attached	5 35
12	43	Wm. M. Ewan, 1 month's wages to December 1, 1874	28 00
	44	John Earley, part pay on breaking stone	20 00
	45	Charles Galaher, part pay on breaking stone at Worthington ..	20 00
	46	John G. Stockdale, balance on furnishing 117 rods and 77 feet limestone on miles 42, 43, 44 and 45, at \$4	271 08

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount
1874.			
Dec. 14	47	D. Brown, 10 bushels corn, at 65c., 5 bushels oats, at 60c., and 100 lbs bran, at \$1	\$10 50
16	48	Gill & Brock & Co., insurance on Scioto bridge, Columbus	37 50
19	49	Levi Miller, 1,250 feet lumber for Zanesville bridge, at \$2.25 per 100	34 20
21	50	I. W. Snider, balance on 272 meals boarding, at 20c., and 80 nights horses to hay, at 25c., 20 bush. corn, at 80c., 3½ bush. oats, at 60c., and \$93.73	33 35
22	51	E. C. Wortman, part pay boarding hands	12 00
	52	James Melvin, amount paid on wages for December, 1874	17 00
	53	Nathan Redman, balance on 1 month's labor to December 1, 1874, at \$15, and \$1 paid for lime at culvert, mile 85, and \$7 paid on December, 1874, for labor	23 00
	54	John Wade, breaking 180 feet limestone at Zanesville	3 15
23	55	J. H. Fleming, 624 feet limestone hauled on miles 129 and 130 ..	6 24
	56	James Anderson, part pay for labor on National Road	30 00
24	57	Wilson L. Bigley, amount paid on labor	30 00
30	58	Jesse Romaine, part pay on breaking stone	10 00
31	59	L. M. Feltns, digging post-holes, taking down old gate No. 1½ and putting up new one, with use of tools, paint and oil, gate ropes, and oil for gate office	9 80
1875.			
Jan. 2	60	Benjamin Wise, 1½ month's labor driving team, to August 15, 1874, at \$30	45 00
	61	Harry C. Ross, repairing floor of Alum Creek bridge	50
4	62	D. Brown, 10 bushels corn, at 70c	7 00
6	63	James Parks, balance on delivering 52 yards gravel on miles 113 and 114, at \$1 per yard	52 00
	64	Christian Kraft, dinner for 3 men and 2 horses, at 25c	1 25
7	65	J. McBeth, 5 lbs. blasting powder	1 25
	66	Sweeney & Fitzgerald, breaking 1,012 feet limestone at Zanesville, at \$20	22 24
	67	Andrew Mahoney, part pay on delivering stone	40 00
8	68	James F. Brown, 1½ month's wages to December 15, 1874	37 50
9	69	same part pay on wages for work	5 00
12	70	Charles Galaher, part pay on breaking 7,465 feet limestone at Worthington, at \$1.50 per rod, \$111.97	100 00
	71	John Earley, balance on breaking 4,295 feet limestone at Worthington, at \$1.50 per 100	44 42
	72	J. D. Gallop, part pay on contract for delivering stone	14 00
	73	Philip Clayton, part pay for breaking stone on miles 67 and 68 ..	20 00
13	73	Preston V. Shock, book for toll-office 3½, National Road	85
	75	same lumber for corn-crib	15 85
	76	Mary Conner, balance on 148 meals, at 20c., horses to hay, 50c ..	16 50
	77	James S. Smith, part pay boarding hands	20 00
	78	Clark & Clayland, for No. 1 Pitts. plow-point, and 44 spikes ...	2 99
14	79	A. Brannon & Son, 3 kegs powder	13 50
	80	Isaac Davis, 500 shingles and 2 quires bill-paper for gate No. 1 ..	3 75
	81	W. Hoge, part pay delivering stone on mile 9	32 00
15	82	Samuel Stilwell, blacksmithing, and repairing wagon and cart ..	30 86
	83	H. West & Son, balance on hardware bill	35 35
	84	John McCarey, blacksmith bill (attached)	7 25
	85	Thos. Michener, 14 days hauling stone on National Road, at \$4 ..	56 00
16	86	Isaac Taggert, 20 bush. corn, at 80c	16 00
	87	Henry Long, amount paid for breaking stone on miles 134, 135 and 136	27 00
	88	Robert Riles, hauling two loads lumber	75
	89	W. McEwan, part pay on wages for Dec., 1874, and Jan., 1875 ..	40 00
	90	Henry C. Sly, paid delivering limestone on miles 137 and 138 ..	20 00
20	91	Wm. Stean, 1½ day's labor cleaning Columbus bridge	1 75

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount
1875.			
Jan. 21	92	John Slaved, 3,070 lbs. of hay, at \$1.10 per 100 lbs.....	\$33 77
	93	D. Brown, 10 bushels corn, at 70c. per bushel	7 00
	94	W. A. Hunt, printing 1,000 toll tickets.....	9 00
22	95	Jacob Snyder, 2 wheelbarrows, at \$5 each	10 00
24	96	John G. Bell, part pay for boarding hands	25 00
27	97	Wm. M. Erwan, balance due for wages up to Jan. 27, 1875.....	16 00
	98	J. M. Wilcox, balance on delivering 209 feet limestone on mile 133, at \$2.75 per rod, \$5.74, and 887 feet on mile 136, at \$3.75 per rod, \$33.26.....	18 00
	99	Harry Long, paid for breaking stone on miles 133, 134, 135, 136 and 137.....	23 75
29	100	Martin Wayt, cleaning well at gate 1½ (bill attached)	5 00
30	101	D. McEwen, for quarrying stone, at \$1 per rod.....	10 00
Feb. 1	102	Louis Cook, part pay on delivering stone at Zanesville	200 00
	103	James Anderson, 19 days' labor, at 96c., 57 days' boarding, at 42c. per day	22 44
2	104	W. L. Bigley, amount paid for labor.....	10 00
	105	James F. Brown, ½ month's labor to January 1, 1875.....	12 50
	106	Akins & Hampson, stove-grate and lining for gate 12	1 35
	107	George Wilcox, balance on delivering 2,640 ft. stone on mile 133, at \$2.75, \$72.60, and 2,896 ft. on mile 134, at \$3.25, \$96.....	73 72
	108	P. C. Cowgill, one shovel.....	1 00
	109	John Gleaves, part pay for breaking stone	10 00
3	110	Milton Handley, 5 weeks and 1 day boarding hands, and keep- ing horses to hay 24 days, and 9 bushels corn.....	32 00
	111	J. D. Gallup, part pay for delivering and breaking stone	17 87
6	112	H. W. Bigley, driving team up to January 1, 1875.....	180 00
	113	John W. Clark, blacksmithing (bill attached).....	16 25
	114	Thornton Grigsbie, breaking 1,364 feet limestone.....	20 46
	115	D. & J. Druman, part pay for quarry lease (Brownsville).....	25 00
	116	Richard Druman, roadway through land to quarry.....	5 00
8	117	G. F. Rauslin, part pay on stone quarry lease, and boarding hands	25 00
	118	J. M. Snider, 12 meals, \$2.30, 2 bushels corn, \$1.60, 4 horses to hay, 80c.....	4 80
9	119	Ralph Robison, amount paid hauling stone on miles 135 and 136	31 00
	120	Albert Postle, hauling 594 feet limestone, on mile 137, at \$3.75 per rod, \$22.27.....	22 27
14	121	Henry C. Sly, balance on hauling 2,014 feet limestone on mile 133, at \$3.75 per rod, \$4.50, and paid on mile 138 \$24.50	29 00
	122	Jonas Wilcox, 3 months' salary, \$300, 592 meals boarding, \$118.40, 3 months' stable rent, \$7.50.....	425 78
	123	William Morrison, part payment on board of hands to February 7, 1875	160 00
	124	James Melvin, balance on wages December, 1875, and three days in January, 1875.....	10 48
	125	D. R. Davis, 350 bricks, at 90c. per 100.....	3 15
Feb. 2	1	Preston V. Shook, hinges and screws, 94c.; staples and latch, 25c.; nails, etc., for gate 3½	3 21
	2	Peter Gephart, sharpening 2 picks, and handles for sledges....	75
4	3	T. A. Decker, pay on account of board bill to February 4, 1875.	110 00
5	4	Nathan Redman, balance on November and December, 1874, wages.....	15 13
9	5	D. McEwen, amount paid on quarry stone	30 00
10	6	W. L. Bigley, balance on wages to February 1, 1875.....	60 32
20	7	John Elliott, breaking 623 feet limestone on miles 132 and 150 ..	9 34
	8	Robert Ridgway, part pay for breaking stone at Hendreysburg.	20 62
	9	R. T. Farrell, 236 meals boarding, at 20c., \$47.20; 22 bushels corn, at \$1.25, \$27.50; corn and hay 4 days for one horse, \$2.50; 3 horses to hay 28 days, \$21; 2 horses fed, and dinner for 1 man, 75c.; 3 extra meals for hands, 75c.....	99 70

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount.
1875.			
Feb. 22	10	George McConnell, omnibus fare for 4 men.....	\$4 00
	11	D. Danford, administrator, for 1 stove and pipe for gate 3½, and chimney-top and hinges for gate No. 1.....	15 45
Mar. 3	12	D. McEwen, balance on quarrying 6,238 feet limestone on miles 129, 130, and 131	22 38
	13	Joseph Richter, for limestone furnished at quarry	10 00
	14	Ralph Robison, for limestone delivered on miles 135, 136, and 137	10 00
	15	Edward Flanagan, repairing culvert on mile 151	2 00
4	16	D. Brown, 17 bushels corn, at 70c	11 90
	17	Wm. Strain, breaking 1,260 feet limestone on mile 130, at \$1.50 per rod.....	18 90
6	18	J. E. Bussey, 6 rods and 10 feet stone in quarry, at 35c., hauling 415 feet, at \$1, and 32 loads surface stone, \$2.50.....	8 78
	19	P. S. Smith, dinner for 2 men and horses	1 00
	20	B. Strain, breaking 380 feet limestone on mile 130, at \$1.50 per rod	5 70
9	21	B. R. Nelson, 1 blank book for gate No. 2.....	1 80
22	22	Joseph Ferrell, paid for boarding hands	25 00
	23	William Hall, boarding 115 men, \$21.91; 8¾ bushels corn, at 75c., \$6.50; 12 days for horses to hay, \$6, and keeping team over night	35 00
24	24	Thomas Brown, for attending Zanesville bridge.....	35 00
	25	Thos. Redman, balance for breaking 1,697 feet limestone on miles 84 and 85, at \$1.50 per rod.....	15 45
	26	E. C. Wortman, 20 rods stone in quarry, at 50c., \$10, and balance on boarding 73 meals, at 20c., \$2.60.....	12 60
	27	Pat. Sweeney, paid for breaking limestone.....	15 00
	28	Thos. Hallerson, " "	10 00
	29	George W. Snelling, breaking 610 feet limestone on mile 195....	9 15
25	30	Joseph Snyder, 1 day's labor repairing bridge and culvert.....	1 50
	31	P. C. Shuback & Co, paid for blacksmithing.....	25 00
	32	J. N. Stone, 128 feet lumber, \$1.60; 3 pounds spikes; ½ day's use of team	3 00
	33	D. Brown, 30 bushels corn, at 70c., \$21, and 100 pounds shorts ...	22 40
	34	R. S. McEwen, keeping 2 men and 2 horses over night.....	2 00
	35	Hugh Riley, breaking 1,755 feet limestone on mile 131, at \$1.50 per rod	26 32
26	36	James Peene, 3,270 pounds hay, at \$22 per ton.....	34 33
	37	Benjamin Wise, 3½ months' wages driving team, to December 1, 1874, at \$30 per month, \$105; blacksmithing, as per bill, \$5.75.....	110 75
	38	David Smith, balance 3½ months' wages, at \$25 per month; 97 meals boarding, at 20c., and 5 days' extra labor up to date....	112 90
	39	Nathan Redman, 31 days' labor to March 15, 1875, at 96c	29 78
	40	James Melvin, 34 days' labor to March 15, 1875, at 96c	32 64
27	41	H. Linneman, 3,282 feet limestone in quarry, at \$1.....	32 82
	42	John Richter, balance on 2,061 feet limestone, at \$1.25 per rod..	15 76
	43	John Moorehead, breaking 630 feet limestone on mile 132, at 1.50 per rod.....	9 45
29	44	D. Brown, 10 bushels corn, at 70c	7 00
	45	J. W. Parker, 1 lot mill feed for State horse.....	26 63
30	46	Jas. McConnahey, part pay for breaking limestone.....	20 75
	47	J. M. Mitchell, 1 stack hay.....	36 00
31	48	Ralph Robinson, balance on hauling 2,598 feet limestone, mile 135, at \$2.75, and 2,989 feet on mile 136, at \$3.25	23 58
	49	John Elliott, breaking 235 feet limestone on mile 130.....	3 51
April 1	50	Door and Sash Co., Columbus, 48 feet pine lumber for wagon bed.....	80
	51	Joshua Ballinger, repairing bridge across Darby Creek	2 50
	52	Benj. Dickey, 6,400 pounds.....	60 00

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount
1875.			
April 2	53	Hugh Riley, 8 days shoveling gravel at Columbus	\$12 00
	54	A. Grove, 2 days	3 00
6	55	R. McEwen, dinner and feed for 1 man and 2 horses; 50 feet stone for culvert, mile 18	1 50
	56	P. S. Smith, dinner for 1 man and 2 horses	75
	57	J. Redmond, balance for keeping hands and horses	2 00
7	58	W. Morrison, keeping men and horses	25 55
	59	Pat. Sweeney, balance on breaking stone, 3,321 feet, miles 84 and 85	34 81
	60	J. W. Snyder, boarding hands 2 weeks	7 00
	61	G. F. Rankin, amount paid for boarding hands and keeping horses	75 00
	62	Thomas Redmond, breaking 398 feet stone, mile 84, at \$1.50 ...	5 97
	63	Andy Cooper, breaking 1,030 feet stone, mile 82, at \$1.50	15 45
8	64	Jesse Romaine, paid for breaking limestone on miles 63 and 64..	10 00
9	65	Charles Gallagher, breaking 1,472 feet stone on mile 82	22 08
	66	Jesse Romaine, breaking stone on miles 65 and 66	5 00
	67	Philip Clayton, breaking 2,166 feet limestone, miles 67 and 68..	12 49
	68	David Richardson, repairing and plastering at gate No. 6	75
12	69	Peter Crum, sharpening 5 drills, and setting 9 horse-shoes	1 55
15	70	Davis & Starbuck	190 00
15	71	L. M. Feltus, services as clerk making report February 15, 1875..	3 00
17	72	Thos. H. Johnson, balance on 76 $\frac{1}{2}$ days hauling stone, and 23 $\frac{1}{2}$ days' labor, at \$1.50, and 215 meals for hands, at 20c., up to March 29, 1875	80 97
	73	Wm. Farrel, on account of 6 months' wages to April 1, 1875....	117 99
	74	Catherine Crynble, balance on breaking 11,500 feet lime- stone	52 55
	75	Wm. Farrel, keeping horses to hay 363 days, at 30c., \$108.90; 6 days' labor, at 96c., \$5.76; 15 months' rent of stable to April 1, 1875, at \$2.50, \$37.50	152 16
21	76	L. M. Feltus, gum-bands for filing engineer's papers, \$1.25; 8 quire day-book for gate 1 $\frac{1}{2}$ (bill attached)	4 45
	77	Jesse Romaine, balance on breaking 2,706 feet stone, miles 66 and 67, and repairing culvert on mile 67	7 00
22	78	J. H. Patterson, for telegraph dispatch to Columbus	1 35
	79	Matthew McLaughlin, breaking 919 feet limestone on mile 17, and 966 feet on mile 18, and 595 feet on mile 19, and 726 on mile 22	48 09
23	80	Jas. Melvin, one-half months' labor to April 2, 1875	12 50
	81	G. F. Rankin, for boarding hands and keeping horses	25 00
24	82	D. Brown, 2,840 pounds of hay and 15 bushels of corn	42 49
	83	Benj. Wise, 275 pounds of hay and 1 bushel of corn	3 15
	84	George Wilcox, 2-horse load of saw-dust for horse-beds	1 50
25	85	Wm. McEwan, repairing culvert on mile 46	1 00
26	86	George H. Parkeson, balance on 11 days' labor shoveling, at 96c	6 36
27	87	George Jennings, 745 feet oak lumber for Columbus bridge	16 75
28	88	J. McBeth, 7 boxes axle grease	1 05
30	89	Robert Clark, delivering and breaking limestone on mile 171 ..	50 00
May 1	90	Benj. Wise, 1 month's labor driving team to January 1, 1875 ...	30 00
	91	Susan Adams, boarding hands, 45 meals, at 19c	8 55
	92	Thomas Thompson, boarding hands, 32 meals, \$5.33; keeping horse to hay, 2 days, \$1.00; 1 bushel of corn, 75c	7 08
	93	H. C. Sly, amount paid on delivering limestone on mile 138	5 00
	94	I. H. Miller, 3 bushels of corn and keeping horses in stable 5 nights	2 50
	95	Jas. F. Brown, 3 months and 9 days' labor, \$25 per month, to May 1, 1875	66 36
	96	Adam Bruntberger, boarding hands, 45 meals, and horses in sta- ble 5 nights	9 55

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and what account.	Amount.
1875.			
May 1	97	John W. Wilcox, 1,200 feet limestone, mile 132	\$33 00
	98	W. L. Bigley, 1 month and 22 days' labor to April 15, 1875	46 14
3	99	S. A. Van Allen, 19 days' labor to May 1, 1875, at 96c. per day ..	18 24
	100	Jonas Wilcox, boarding hands, 985 meals, at 20c.	197 00
4	101	J. W. Syner, boarding horses, 41 meals, at 20c., \$8.20; and keep- ing horses to hay, 18 days, at 25c., \$4.50; and 4½ bushels of at corn, 75c., \$3.07	16 07
	102	Wm. Morrison, balance for boarding hands, 1,249 meals, at 20c., and keeping horses to hay, 318 nights, at 25c., and 41½ bush- els of corn	23 45
	103	Thompson Gugsbie, breaking 55 perch limestone on mile 92 ...	8 20
5	104	David Marshall, 15 gallons of oil for gate office No. 12½, at 37c.; for bolts for doors and windows and repairs of bridge	6 60
	105	G. D. Gallop, paid for breaking and delivering stone on miles 50 and 51	41 87
	106	James Melvin, 9½ days' labor, at 96c., to April 13, 1875	9 12
	107	Thomas Holloran, breaking 5,205 feet of limestone, miles 88, 89, 90, 91, and 92	57 54
	108	Michael Kelloy, breaking on miles 74 and 75, on account	20 00
	109	Thomas Morton, " "	15 00
6	110	Wm. Kyle, balance on 6 months' wages to April 1, 1875, at \$30..	116 05
	111	Preston F. Shook, rent of garden for gate 3½	5 00
	112	Wm. C. George, 1 day hauling with 2-horse team	3 00
	113	David Smith, 21 days' labor shoveling to May 1, 1875	20 20
7	114	William Patterson, cleaning ditch on mile 6	50
	115	Henry F. Pickering, furnishing timber and sawing same for new gate 1½	10 00
	116	Harrison Estep, stone furnished on National Road	3 00
	117	R. H. McBride, sharpening picks and mending tools	2 55
	118	Alfred McGary, 263 bushels of coal, hauled by State teams and sold for benefit of road, proceeds of sale accounted for in re- ceipts of road	10 52
	119	Chas. F. Frazier, 1,950 pounds of hay, at \$22 per ton	21 45
	120	M. Kline, part pay on contract for corn, at 70c	50 00
	121	W. T. Eagan, blacksmithing, as per bills attached	5 30
	122	Thomas Fenian, balance on breaking stone, 1,120 feet, miles 34, 56, and 57	148 03
	123	S. C. Seabright, for blacksmithing	17 05
	124	Thomas Johnson, 1 day shoveling stone	1 50
	125	Theo. Huth, 22 bushels of corn, at 80c	17 60
	126	Wm. Hugh Barber, for quarrying 38 rods and 28-100 of lime- stone	13 12
	127	Jesse Romain, part pay for breaking stone on National Road ..	10 00
	128	Douglass & Pack, timber for culverts and shingles and hauling same	17 00
	129	C. P. Davis, repairing wagon	1 25
	130	Isaac Taggert, jr., 7½ bushels of corn, at 80c	6 20
	131	W. S. Campbell, hauling tools for road hands	75
10	132	W. S. Hunt, 5 blank books for use on road, and furnishing 500 cards for gate tickets, No. 1½; printing	12 25
	133	Jas. McMillen, 680 pounds of hay	8 75
	134	Thomas Michener, part pay for hauling stone	20 00
	135	Joseph Moon, balance on 29 days' board for 2-horse team, at \$1.50	23 00
	136	Thomas H. Johnson, part pay for hauling stone at Zanesville ..	15 00
	137	Jonas Wilcox, 3 months' services as superintendent and 3½ months' rent of stable	307 50
11	1	Nathan Redman, 1 month's wages to April 15, 1875, \$28; ex- penses from Columbus to St. Clairsville, \$4	32 00
16	2	E. Field, boarding hands 3 weeks and 2 meals at 20 cents	13 00

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount.
1875.			
May 17	3	G. W. Shearer, amount paid on breaking limestone on mile 139.	\$5 00
28	4	J. W. Dennison, repairing harness.....	4 25
31	5	Robert Widdicomb, 1 day hauling dirt and gravel.....	3 00
	6	Robert Clark, balance on delivering, breaking, and spreading 3,171 feet of limestone on mile 171.....	24 23
June 1	7	H. C. Sly, balance for delivering 1,064 feet of limestone on mile 137.....	21 50
	8	G. W. Shearer, balance for breaking 1,064 feet of limestone on mile 137.....	10 96
	9	D. Say, amount paid for breaking 2,426 feet of limestone on mile 135.....	10 00
	10	E. K. Hill, boarding hands 2 weeks, \$8.40; keeping horses to hay and stable 8 days, \$2; 3 bushels corn, \$2.25.....	12 65
	11	Benjamin Wise, 1 month driving team to February 1, 1875, \$30; 416 feet lumber for Little Darby bridge, \$7.31.....	37 31
	12	W. L. Bixly, 1½ month's labor to June 1, 1875.....	37 50
	13	James T. Brown, 21½ days' shovelling to June 1, 1875.....	20 60
	14	James Gillmore, 1 hand-saw, \$1.80; 12 pounds spikes, 60 cents.	2 40
	15	Joshua Ballinger, 1 day's labor at Little Darby bridge, and 3 pounds spikes.....	1 65
	16	C. Krafft, 9 meals for hands, \$2.25; horses to hay 4 days, 80 cents, and 1 bushel corn, 75 cents.....	3 80
	17	Anson Warner, 5 meals for hands, \$1.25; 4 horse feeds, \$1; 2 bushels oats, \$1.....	3 25
4	18	Richard Coarson, 42 meals for hands, at 20 cents, \$8.40; keep- ing horses to hay and stable 12 days, \$3, and 3 bushels corn, \$2.25.....	13 65
	19	E. Field, 12 meals for hands, \$3; keeping horses to hay and grain 4 days, \$2.....	5 00
	20	Wm. Terry, breaking 303 feet limestone on mile 90.....	4 54
	21	Alexander Smith, 12 meals for hands, keeping horses 2 days, and 1 bushel corn.....	4 00
	22	Wm. D. Marsh, repairing and plastering at gate No. 9.....	3 12
5	23	James Melvin, 1 month and 15 days' labor to June 1, 1875, at \$25.....	39 42
	24	T. A. Van Allen, 1 month's labor to June 1, 1875, \$25; 1 week's board, \$4.20.....	29 20
	25	H. W. Bigby, 1 month and 3 days' driving team to April 1, at \$30.....	33 45
	26	T. A. Decker, 4 weeks and 2 days' boarding hands, at \$4 per week.....	16 49
7	27	David R. Bell, 3 meals boarding hands.....	75
	28	M. McCloud, 36 meals for hands, \$7.20; 2 bushels corn, \$1.80; horses to hay 10 days, \$2.50.....	11 50
	29	David Richardson, 644 feet lumber for culvert on mile 54, at 50 cents, \$9.66; dinners for 3 men, 75 cents.....	10 41
8	30	B. S. Hering, 54 meals for hands, \$10.80; horses to hay 12 nights, \$3; 2 bushels corn.....	15 40
	31	John Ferryman, amount paid Geo. Gallop for delivering stone on miles 50 and 51, \$7.50; amount of garden at gate No. 5, to April 1, 1876, \$4, book for gate, \$2.....	13 50
	32	James L. Smith, 147 meals, at 25 cents, \$36.75, and horses to hay 43 days, at 25 cents, \$10.75.....	47 50
	33	Wm. Null, 60 meals for hands, \$12; horses to hay 17 days, \$4.50.	16 50
9	34	Nathan Redman, 1 month driving team to June 1, 1875.....	28 00
	35	Wm. Kile, 1 month's labor to May 1, 1875.....	30 00
	36	David Smith, 1 month's labor to June 1, 1875.....	25 00
	37	Mary Cowner, 12 horse feeds, and 8 meals boarding.....	5 00
	38	B. T. Tarrell, boarding hands 12 meals, \$3, and hay for 3 horses, 75 cents.....	3 75

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount
1875.			
June 9	39	Sarah J. Flowers, 50 meals for hands, \$11.20, and horses to hay 22 nights, at 25 cents, \$5.50	\$16 70
	40	Dennis Quinlin, breaking 1,802 feet limestone on mile 13, at \$1.50	27 00
	41	B. R. Nelson, quarrying 266 feet limestone, at \$1.50 per 100	3 96
	42	Isaac Davis, plastering chimneys and setting grate at gate No. 1.	6 50
	43	J. H. West, 25 gallons coal-oil for gate No. 1	5 75
10	44	Thomas H. Johnson, 197 meals for hands, at 20 cents	39 40
	45	John Simpson, 25 meals for hands, at 25 cents	6 25
	46	Jerome B. Enon, sharpening drills, picks, and crow-bars	3 87
	47	Gilbert Donnelly, breaking 656 feet limestone on mile 27	9 84
11	48	Eben W. Ridgway, breaking 633 feet limestone on mile 27	9 69
	49	Clinton Buchanan, breaking 180 feet limestone on mile 27	2 70
	50	Ludwell Tinman, 41 meals for hands, \$8.20, and horses to hay 23 days, \$5.75	13 95
	51	J. S. Umstet, 3 sticks timber for culvert on mile 42	1 80
	52	Charles Gallaher, breaking 925 feet limestone on mile 33	14 35
	53	John Early, breaking 802 feet limestone on miles 34 and 35	12 03
12	54	Mary Shoofoe, boarding hands 41 meals, \$8.20; 3 bushels corn, at 80 cents, \$2.40; horses to hay 12 nights, \$3; 384 feet lumber, \$5.76, and 1 wrench, \$1.50	20 86
	55	Joseph Farrell, balance on stone delivered on mile 32	5 00
	56	Wm. Redman, 200 feet lumber	3 00
14	57	Thomas Brown, 1 month attending brigade at Zanesville, May 1 to June 1	25 00
	58	Andrew Mohoney, part payment on stone delivered	40 00
	59	B. Strain, breaking 977 feet limestone on mile 129, at \$1.60	15 63
	60	George Wilcox, 3 days' hauling stone on mile 129, at \$3	9 00
16	61	J. Lampton, breaking 10 60-100 rods stone	15 90
17	62	Andrew Grady, part payment for breaking 4,541 feet of stone on miles 74, 75, and 76, at \$1.50 per rod	25 00
	63	D. Palmer, repairing wagon	2 25
22	64	Hannah Morison, boarding hands 37 meals, at 20c., \$7.40; horses to hay 8 nights, \$2.00; 13 bushels corn, \$1.15; 4 horse feeds, 80c.	11 55
	65	J. L. Smith, 12 meals for hands, and keeping 2 horses over night	4 25
	66	G. F. Rankin, balance on boarding hands 937 meals, at 20c., \$187.20; keeping horses to hay 212 days, at 25c., \$53.00; 60 bushels corn, at 80c., \$48.00; 1 bushel oats, 40c.; 5 bushels shorts, \$1.37; and amount paid on contract for delivering limestone on miles 84 and 85, \$18.37	48 53
	67	Geo. Bloom, 1 day shoveling stone	1 00
30	68	Samuel Graver, boarding hands 9 days; keeping horses to hay 6 nights	7 60
	69	E. R. Hill, 5 meals' boarding and 4 horses to hay	2 25
July 1	70	Wm. Evans, boarding hands 9 meals and keeping horses to hay	3 25
	71	Wm. Jones, 625 feet oak lumber for repairing Big and Little Darby bridges, at \$1.80	11 25
5	72	James Melvin, 1 month's labor, from June 1 to July 1	25 00
	73	James F. Brown, 1 month's labor, from June 1 to July 1	25 00
6	74	Nathan Redman, 1 month's labor, from June 1 to July 1	28 00
	75	H. W. Bigley, 1 month's labor, from June 1 to July 1, \$30.00; part payment of old debt, \$20.00; items in bill attached, \$8.33	58 33
	76	Benjamin Wise, 1 month's labor, \$30.00; items in bill attached, \$4.35; on old debt, \$25.00	59 35
	77	T. A. Van Allen, 16½ days' labor	15 84
	78	T. A. Decker, 367 meals, at 20c., \$73.40; 290 horse feeds, at 20c.	131 40
	79	W. L. Bigley, 1 month's labor, to July 1	25 00
7	80	Solomon Agy, breaking 6.20 rods stone, at \$2.50	9 75
8	81	G. D. Gallop, paid on stone contract	111 91

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount
1875.			
July 1	82	Alexander Hall, breaking 2 rods and 36 perches stone, at \$1.50.	\$3 54
	83	Ludwell Tinsman, 82 meals' board, \$16.40; horses to hay 44 days, \$11.00	27 40
	84	Robert Courtney, blacksmith bill in full	5 30
	85	Amos Homer, 3 weeks and 7 meals' board, at \$4.50; 36 days keeping horses, at 25c	24 01
9	86	Wm. Kyle, 1 month's labor, to July 1, \$30.00; 65 meals, at 20c., \$13.00; transportation, \$1.40	44 40
	87	David Smith, 1 month's labor, \$25.00, and 64 meals, at 20c., to July 1	37 80
10	88	M. Kline, part payment on old debt of \$62.20	16 20
	89	John B. Johnson, breaking 15 rods of stone	22 50
	90	A. P. Dunham, 1 globe lantern, 40c.; 1 bottle of oil, 50c	90
	91	Thomas Tixen, part payment on 21 days' labor	5 00
	92	Jno. Gleaves, part payment for breaking 4,821 feet stone, at \$1.50	20 00
12	93	Michael Kelley, part payment for breaking 31.05 rods stone, at \$1.50	17 00
13	94	Thomas Norton, part payment for breaking 3,770 feet stone, at \$1.50, \$56.35; 293 perches, at \$1.75	20 00
	95	Thos. O'Halleran, balance due for breaking 6,205 feet stone, at \$1.50	25 00
	96	Lawrence Moran, 7 days' labor, at \$1.50	10 50
14	97	Thomas Brown, 1 month's labor, \$25.00, and \$10.00 on debt prior to May 1	35 00
	98	John T. Fluke, setting 4 horse-shoes, 60c.; bolts for wagon, 10c.	70
	99	Lewis Cook, for quarrying and delivering 82 rods of stone for Main street, Zanesville, at \$4.50	369 00
	100	Alexander Smith, part payment on old debt for boarding hands and keeping horses and stone privilege	37 18
	101	Perry & Chappellear, paid on lumber for Zanesville and Hebron bridges and toll-house and culvert on mile 85	70 00
15	102	G. M. Halliday, 1 day's labor repairing culvert on mile 118	2 00
16	103	D. Brown, 5 bushels corn, at 80c., \$4.00; 3 bushels oats, at 70c., \$2.00; 100 pounds shorts, \$1.40	7 50
	104	J. H. Morts, 60 feet limestone delivered on mile 129	2 00
17	105	A. McNinch, part payment on 86.80 feet limestone in quarry, at \$1.00	36 80
	106	Christian Krafft, 6 meals' boarding hands, keeping 2 horses to hay, and 1 bushel corn	2 75
	107	J. B. Milhons, part payment on hardware bill of \$93.06, and for shovels, picks, nails, and 2 scrapers, \$19.00	43 06
	108	J. W. McCaslin, blacksmith bill in full	18 50
18	109	John H. Crooks, 3 days hauling, at \$3.00	9 00
20	110	John W. Shapter, 9 loads gravel, at 15c., \$1.35, and 14 loads screened, at 20c., \$2.80	4 15
	111	T. C. Bigelow, amount paid on breaking stone in the fall of 1874, leaving balance due of \$82.05	40 00
22	112	Andrew Mahony, part payment on debt of \$559.26 for delivering stone prior to May 1, 1875	100 00
29	113	F. Dugherty, dinner for 3 men	1 25
31	114	Lamb. M. Fetus, repairing pump at gate 1½, \$1.25; services as clerk making quarterly reports of W. R. Ritts and copy, \$3.00	4 25
Aug. 1	115	Isaac Davis, day-book for gate No. 1	3 60
	116	Wm. Kile, 1 month's labor	30 00
	117	David Smith, 1 month's labor	25 00
	118	Thomas Finern, part payment on 21½ days' labor	10 00
	119	Nathan Redman, 1 month's labor	28 00
	120	A. Brennan & Son, powder and fuse	8 50
3	121	C. Galigher, breaking 8 rods of stone, at \$1.50	12 00
	122	G. D. Gallup, furnishing 14½ rods of stone, at \$5.25	74 37

STATEMENT OF EXPENSES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount
1875.			
Aug. 3	123	James F. Brown, 23 days' labor, at 96c.....	\$22 08
	124	Benj. Wise, 1 month's labor	30 00
	125	James Melvin, 15½ days' labor	14 88
4	126	William Morrison, keeping 3 men and 2 horses over night.....	1 80
5	127	Jonas Wilcox, boarding hands, 77 meals, at 20 cents	15 40
	128	same 3 months' salary as superintendent, \$300; 3 months' rent of stable, \$7.50	307 50
	129	E. G. Bell, part payment on board bill of \$55, prior to May 1, 1875.....	20 00
	130	H. W. Bigley, 1 month's labor	30 00
	131	Wilson L. Bigley, 1 month's labor	25 00
	132	A. J. Spaulding, 12 days' service supervising building of cribs at Zanesville bridge.....	35 00
	133	Thomas Brown, 1 month's labor tending Zanesville bridge.....	25 00
	134	Jonas Wilcox, postage, \$1.50; blank book, 30 cents; bank checks, 20 cents; freight, 50 cents; express, 25 cents; horse hire, \$1.50; stamps, 48 cents.....	4 73
	135	Thomas Naughton, part payment on breaking 38 rods of stone prior to May 1, 1875.....	20 00
	136	Michael Kelly, part payment on breaking 31 rods of stone prior to May 1, 1875	20 00
	137	T. A. Decker, 430 meals, at 20c cents; 118 days keeping horses, at 60 cents	156 80
6	138	Herdman, Harlan & Co., 4 barrels cement	10 00
	139	E. E. Tellmore & Co., spikes, nails, etc., as per bill.....	31 32
	140	Hatton & Helbig, first payment for building crib and masonry at Zanesville bridge; whole cost, \$668.50	450 00
	141	P. C. Schuback & Co., shoeing horses, mending wagons, etc., per bill.....	11 35
7	142	Louis Cook, 7 rods of stone, delivered, at \$4.50	31 50
6	143	Jones & Abbott, 1 stove for gate No. 9½.....	7 00
11	144	William G. Johnson, 60 feet of hewed timber, at 12½ cents, and 84 feet, at 6 cents	12 54
31	1	Lewis Duvall, repairing roof and kitchen of house.....	10 00
Sept. 1	2	Chris. Kraft, 7 weeks boarding hands, at \$4; keeping horse, \$11.25; hay and 8 bushels corn, \$5.....	44 25
4	3	H. W. Bigley, 1 month's labor	30 00
	4	W. L. Bigley, " to September 1	25 00
	5	James Melvin, " "	25 00
	6	Benj. Wise, " "	30 00
	7	James F. Brown, " "	25 00
6	8	Geo. W. Thompson, ag't, one-half insurance on bridge on N. R..	86 25
	9	A. C. Ross, " " " "	50 00
	10	T. A. Decker, 86 meals for hand, at 20 cents, \$17.20; 74 feeds for horses, at 20 cents, \$14.80	32 00
	11	Thomas Brown, 1 month's labor tending Zanesville bridge.....	25 00
	12	M. Shott, boarding, 6 meals, and 2 feeds for horses, at 25 cents..	2 50
	13	Jesse Romaine, delivering and breaking 700 feet of stone on miles 69 and 70, at \$6 per rod.....	42 00
	14	Mitchell McCloud, dinner for 2 men and hay for 2 horses	60
	15	John S. Gallup, 404 feet oak lumber for bridge on mile 50.....	8 08
7	16	B. S. Herring, boarding hands, 22 meals; 50 feet of timber for culvert, and 1½ bushels of corn	7 35
	17	William Richards, repairing roof of gate-house No. 5	1 00
	18	M. Kline, part payment on lot of corn, leaving balance due \$35..	15 00
	19	J. L. Smith, 2 barrels of lime.....	4 00
	20	Simpson George, blank book for gate No. 4.....	1 25
	21	same part payment on lumber, leaving balance due \$25—2,000 feet.....	15 00
	22	J. L. Smith, balance on old board bill for men and horses.....	27 42

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount
1875.			
Sept. 7	23	W. I. Porter, breaking 645 feet of stone on mile 30	\$9 95
	24	Joseph Finnell, balance on old board bill	20 00
8	25	Geo. P. Scheick, horse-shoeing, cutting tire, and repairing tools..	13 55
	26	David Smith, 1 month's labor to Sept. 1.	25 00
	27	Nathan Redman, driving team 1 month, \$28; 6 boxes axle- grease, \$1; freight, 30 cents; shoeing horse, \$1	30 30
	28	Priscilla Baldwin, 81 meals for hands, at 20 cents.....	16 20
	29	C. M. Tidball, 3 days hauling lumber to gate No. 3½.....	9 00
	30	Ludwell Tinsman, 5 meals for hands, \$1; keeping horses 4 nights, \$1	2 00
	31	Charles Shoemaker, boarding hands 7 weeks and 5 days, at 20 cents per meal, \$32.40; ½ bushel oats, 30 cents; 1 gallon of oil for harness, \$1; hay for horses, 36 days, \$9	42 70
	32	John Patterson, boarding hands, 149 meals, at 25 cents, \$37.25; hay for horses 32 days, at 25 cents, \$8; 1 scantling, 20 cents..	45 45
	33	William Kile, 1 month's labor to September 1	30 00
Sept. 8	34	Amos Horner, boarding hands 10 weeks and 11 meals, \$47.25; hay for horses 68 days, \$17; use of wagon 5 days, \$2.50.....	66 75
	35	A. E. Dungan, repairing wagon, sharpening tools, shoeing horses	41 30
	36	Thomas Finon, balance on 21 days' labor, \$16.50; breaking 600 feet limestone, at \$1.50 per hundred, \$9	25 50
	37	Henry Dukes, breaking 20 rods limestone on mile 2.....	30 00
9	38	James McConaughy, part payment for breaking 5,330 feet of limestone on miles 19, 20, 21 and 22, leaving balance \$29.95..	10 00
10	39	M. George, breaking 586 feet limestone on mile 31.....	8 79
	40	Jas. Moore, hay for horses 56 days, at 25c.; 13 bush. corn, at 75c.	23 75
	41	T. D. Gallup, part payment for breaking and delivering 4,200 ft. of limestone, at \$5.25, leaving balance of \$71.72.....	127 50
11	42	James Livingood, 300 feet 8x10 timber, and 22 feet of dressed stone for culvert on mile 64	4 80
13	43	Thomas Norton, breaking 28 84-100 rods of stone, at \$1.50.....	43 30
	44	Michael Kelley, " 30 " " " "	45 00
16	45	Lewis Cook, stone delivered on miles 73 and 74.....	100 00
22	46	Jesse Romaine, breaking and delivering 5 rods of stone, at \$6..	30 00
Oct. 2	47	B. R. Nelson, repairing house at gate No. 2.....	4 06
	48	Joshua Ballinger, new post and setting at gate No. 15.....	2 00
	49	Wm. Kyle, 1 month's labor.....	30 00
	50	Nathan Redman, 1 month's labor	28 00
	51	David Smith, 1 month's labor	25 00
	52	A. Horner, breaking 642 rods of stone, at \$1.50	9 60
	53	H. Duke, breaking stone on miles 2 and 3.....	58 23
	54	I. B. Chappellear, quarry privilege for 4,567 feet of limestone..	23 83
	55	Wm. Morrison, keeping 3 men and 2 horses one night.....	1 70
	56	Wilson Rush, 3 horse-shoes and shoeing and sharpening tools..	1 95
	57	John Ridenour, boarding hands 21 meals, at 20c.; hay for horses 6 days, at 25c.; brush and gravel, 50c.....	6 20
	58	Randall & Co., blank book for gate 14	2 00
3	59	Wm. Kyle, 101 meals at 20c	20 20
	60	John Groves, fuse and 1 keg of powder	6 50
	61	Thomas H. Johnson, 207 meals, at 20c.; keeping 34 horses, at 50c., and 34 bush. oats, at 40c.....	68 20
4	62	T. D. Gallup, 25 rods of stone, delivered and broken, at \$5.....	125 00
5	63	David K. Bell, 173 meals, at 25c.....	45 25
6	64	Samuel Oldham, repairing bridge at Zanesville.....	12 50
	65	Thomas Brown, 1 month tending bridge at Zanesville.....	25 00
	66	H. W. Bigley, 24 days' labor.....	27 70
	67	Benj. Wise, 22 "	25 40
	68	W. L. Bigley, 22 "	21 16
	69	Jas. F. Brown, 22 "	21 16
	70	Jas. Melvin, 22 "	21 16

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount
1875.			
Oct. 6	71	H. W. Bigley, shoeing horse, nails, 1 new shoe, removing axle-trees, 20 lbs. nails, removing 1 shoe, 1 new shoe.....	\$5 40
	72	Decker & Sidle, 925 meals for hands and horses, at 20c	185 00
7	73	Louis Cook, to apply on contract of stone delivered since May 1, 1875	125 00
	74	Andrew Mahoney, to apply on debt of \$528 prior to May 1.....	25 00
	75	Fred. Helbig, 2d payment on bridge pier, costing \$668.50, leaving a balance due of \$100.....	118 50
11	76	Jesse Romaine, 3 rods of stone, delivered and broken, at \$6....	18 00
15	77	Wm. Keisan, 8 barrels lime.....	8 00
19	78	Ed. Flanagan, 1 day with team and 2 hands repairing culverts..	4 75
20	79	Michael Kelly, breaking 3 92-100 rods of stone, at \$1.50.....	5 88
	80	George W. Thompson, agent, balance of insurance on bridges..	86 25
	81	A. C. Ross, agent, balance of insurance on Zanesville bridge...	50 00
	82	Ferguson, Mead & Co., 731 feet of joists for bridge	11 44
26	83	Wm. Seedwitz, 1 pair check-lines and 2 bridle-bits	3 60
	84	J. T. Warder, rent of garden for gate No. 17.....	10 00
27	85	Eliza Fields, boarding hands 16 meals and horses 4 days	5 50
	86	Lucinda O'Harra, quarry privilege for 5,225 feet of limestone used on miles 2 and 3.....	13 06
	87	B. C. Patterson, 2,062 ft. stone in quarry, at 40c., for miles 2, 3..	8 24
28	88	Charles T. Frazier, 768 feet hemlock lumber, and nails, for repairing culverts on mile 2.....	12 00
29	89	Henry West & Son, 3 pick-handles, 78c.; 2 pad-locks, 80c.; 5 shovels, \$6.85; 6 pick-handles, \$1.50	9 90
	90	Amos Horner boarding hands 7 weeks, and 1 meal, at \$4.50 per week, \$31.72; 9 bush. corn, at \$1; hay for horses 34 days, at 25c.....	49 42
	91	John Patterson, boarding hands 52 meals, at 25c.; hay for horses 20 days, at 20c.; 3 bush. corn, at 75c.; use of horse 5½ days, at 50c., and ½ bush. oats.....	23 20
	92	Thomas Hartley, 2,666 feet limestone, at 25c. per rod	6 66
	93	L. C. Seabright, 3 horse-shoes, 3 old shoes toed, tightening 6 shoes, and sharpening 7 drills	3 90
30	94	Thos. Finan, breaking 4,336 ft. stone at \$1.50, on miles 3, 7, 8, 9	65 04
	95	James Anderson, 1 day repairing culvert on mile 11.....	1 50
	96	Thomas S. Young, breaking 645 ft. stone on mile 11.....	9 67
	97	William Kyle, 1 month's labor to November 1.....	30 00
	98	David Smith, 1 " "	25 00
	99	Nathan Redman, 1 month's labor driving team, \$28; repairing harness, 10c.; axle-grease, 30c.; medicine for sick horse, 50c..	28 90
Nov. 1	100	Wm. Feltus, breaking 852 feet stone on mile 9.....	12 78
	101	Charles Shoemaker, boarding hands 32 meals, hay for horses 8 nights, and 7 bush. oats	11 20
	102	Wm. Terry, repairing house at gate No. 10.....	2 00
	103	Joseph Snyder, repairing bridge.....	90
	104	Geo. T. Schick, sharpening tools, 6 bolts, \$2.30; 2 horse-shoes and 5 removes, \$1.85; 1 felloe and 2 cleats for wagon, 50c....	4 65
	105	John R. Johnson, balance on breaking 1,823 feet limestone	5 29
	106	H. W. Bigley, 1 month driving team to November 1; medicine for horses, \$1.50; 3 horse-shoes, \$1.50; sharpening 3 picks, 35c.	33 35
	107	Benjamin Wise, 1 month driving team, \$30; \$20 on old debt...	50 00
	108	James F. Brown, 1 month's labor to November 1	25 00
	109	W. L. Bigley, " "	25 00
	110	James Melvin, " "	25 00
	111	William Null, boarding hands, 29 meals, at 20c., \$5.80; hay for horses 8 nights, at 25c., \$2; 1 bushel corn, 50c	8 30
2	112	John Erley, breaking 407 feet limestone on mile 34.....	6 10
	113	James L. Smith, boarding hands, 85 meals, \$21.25; hay for horses 26 days, \$6.50	27 75

STATEMENT OF EXPENDITURES—Continued.

Date.	Number voucher.	To whom paid, and on what account.	Amount.
1875.			
Nov. 2	114	Charles Galihier, breaking 1,083 feet blue coar stone on mile 33, at \$1.75, \$18.95; 252 feet limestone, mile 34, \$3.78	\$22 73
	115	William Richards, stove-pipe for gate-house, gate 5	50
	116	Thomas Hyde, 20 meals for hands, \$5; hay for horses 2 nights, 50c.	5 50
	117	Isaac Lofland, boarding hands 9 weeks and 2 days, at \$4, \$37.20; hay and grain for horses 52 days, at 50c., \$26	63 20
3	118	Mitchel McCloud, delivering and breaking 390 feet stone on mile 59, \$18.52; boarding hands, 20c.; hay for 4 horses and 3½ bushels corn, \$7.80	26 32
	119	Isaac Wilson, building temporary bridge on mile 65	3 00
4	120	Jesse Romaine, delivering and breaking stone on miles 72 and 73	5 00
	121	Robert Clark, 50 rods broken stone on road in Springfield, at \$5.40	270 00
5	122	Stitt, Price & Co., 30 bushels lime and 4 barrels	4 35
	123	David Pugh, 758 feet oak lumber, at \$2, \$15.16, and 445 feet hickory, at \$1.50, \$6.70, for culverts near Reynoldsburg ...	21 86
	124	Chris. Kraft, 7 perch of stone, at 90c	6 30
	125	Geo. W. Thompson, agent, insurance on National Road bridge, \$2,500, for 1 year from October 18, 1875	50 00
	126	Jesse Romaine, 7 36-100 rods of stone, at \$6	44 00
	127	Thomas Brown, 1 month tending Zanesville bridge	25 00
	128	Jonas Wilcox, blank book, 26c.; postage, 81c.; checks, 30c.; paper, \$1; postage, 50c.; postage envelopes, 80c	3 67
	129	Jonas Wilcox, 3 months' service as superintendent, at \$100; rent of stable, \$7.50	307 50
	130	Dicken & Sidle, 10 meals for hands and 5 for horses	3 60
	131	J. T. Fracker, 4 days' service, at \$1.50; railroad fare, \$2.50; hotel fare from Zanesville to Springfield and return, \$6.82 ..	15 32
	132	L. Miller, 2,000 feet 2-inch plank for Zanesville bridge, at \$2 per 100 feet	20 00
9	133	Herdman, Harlan & Co., lumber for gate-house at gate No. 9½, as per bill	55 00
	134	Hatton & Helbig, payment in full for building crib pier at Zanesville bridge, cost, \$668.50	100 00
	135	George Gallup, payment on contract for delivering stone at Cambridge	50 00
11	136	Lewis Cook, payment on contract for delivering stone at Zanesville	87 18
		Total disbursements for repairs	\$15,957 96
		W. R. Ritts and S. R. Hosmer, for salary	1,307 16
		Total disbursements	\$17,265 12